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DEPARTMENT OF THE ARMY FIELD MANUAL

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, (CBR) COMBAT SERVICE SUPPORT TASTA-70

HEADQUARTERS, DEPARTMENT OF THE ARMY
JANUARY 1967

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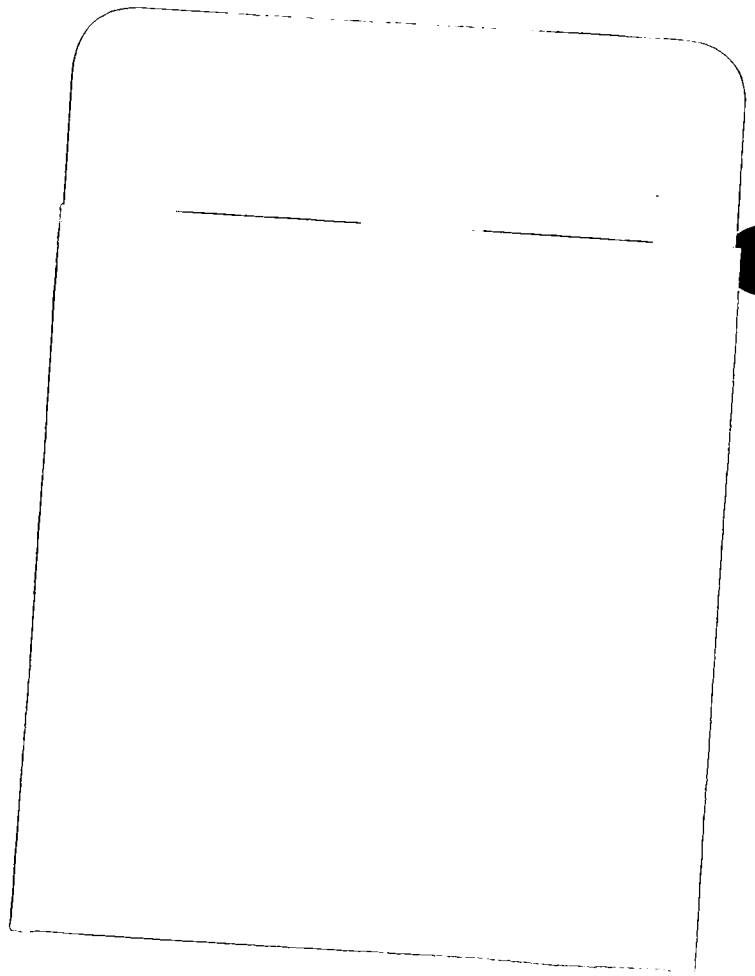

FOREWORD

This manual is published to provide interim guidance to commanders, staff officers, and other personnel concerned with CBR Combat Service Support under the TASTA–70 concept of organization and operation. This information can be utilized to facilitate reorganization under the TASTA concept. Firm information on the organizational structure and composition of units will be as contained in TOE's when published. Although the basic TASTA–70 study has been approved by Department of the Army, detailed doctrine contained in this Test Field Manual is subject to further Department of the Army review and final approval. Users of this test manual are encouraged to submit recommendations to improve its clarity or accuracy. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded direct to USACDC CBRA Fort McClellan, Alabama 36201. FM 3–1 (TEST) will be superseded by a formal field manual and be identified as FM 3–1 same title.

FIELD MANUAL
No. 3–1 (TEST)

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *23 January 1967*

CHEMICAL, BIOLOGICAL, RADIOLOGICAL (CBR) COMBAT SERVICE SUPPORT TASTA–70

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CHAPTER 1

INTRODUCTION

1. Purpose

This manual provides guidance on the organization and operation of chemical, biological, and radiological (CBR) activities in a theater of operations. It is intended for use by personnel who need information related to combat service support and combat support at all echelons within a theater of operations. More detailed information on specific operations and functional systems and on multi-functional organizations at various echelons is provided in related field manuals which are listed in appendix A.

2. Scope

a. This manual describes the CBR activities in a theater of operations; staff employment responsibilities peculiar to chemical, biological and radiological activities, and relationship between subordinate organizations.

b. Chemical organizations within the theater and the manner in which they provide combat service or combat support to the field are described. The information provided is applicable to both nuclear and nonnuclear warfare and internal defense and development operations.

c. This manual repeats information presented in other test field manuals only where required for clarity or consistency. The manual should, therefore, be used in conjunction with other applicable texts.

3. Changes and Revisions

Users of this manual are encouraged to submit recommendations to improve its clarity and accuracy. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Originators of proposed changes which would constitute a significant modification of approved Army doctrine may send an information copy, through channels, to the CG, USACDC, to facilitate review and follow-up. Comments should be forwarded direct to the Commanding Officer, U.S. Army Combat Developments Command CBR Agency, Fort McClellan, Alabama 36201.

4. Impact of Nuclear and CBR Operations

The CBR combat services described considers the impact of nuclear, chemical, biological, and radiological operations and is based on the threat of or use of such weapons.

5. Mission

The mission of CBR activities in a theater of operations is to assure that technical or service support is furnished to combat, combat support, and combat service support elements within a theater. This requires integration of appropriate staffs and qualified technical personnel into organizations or headquarters in order to furnish technical advice or service in offensive and defensive CBR operations.

6. Functions

a. The service and support functions discussed are staff services, supply, ammunition, maintenance, field impregnation (reimpregnation) of clothing, decontamination, technical intelligence, laboratory services, and rear area security and damage control.

b. The broad services and support functions listed in *a* above encompass the following:

(1) Acquisition, storage and distribution of chemical-biological ammunition and chemical-biological materiel.

(2) Maintenance of chemical-biological materiel in the hands of user activities.

(3) Technical escort of hazardous chemical-biological ammunition and radioactive waste.

(4) Recovery, classification, evacuation, salvage and disposal of chemical-biological materiel.

(5) Surveillance, renovation and disposal of chemical-biological ammunition.

(6) Management of chemical and biological materiel as directed.

(7) Modification of chemical and biological materiel as directed.

(8) CBR operational and training aspects to include the area damage control center.

(9) CBR decontamination of critical areas and supplies.

(10) Chemical processing of permeable type protective clothing through impregnation or reimpregnation.

(11) Technical supervision of chemical organizations.

(12) CBR technical intelligence.

7. Definitions

Definitions of terms used throughout this manual are contained in AR 320–5. Uncommon terms used in this manual but not found in AR 320–5 are defined or explained when first introduced.

CHAPTER 2

STAFF SERVICES

Section I. INTRODUCTION

8. General

The potential threat and implications of CBR operations are such that all commanders and staffs must understand the impact of CBR operations on the tactical situation and on logistical functions in any theater of interest. Commanders and staffs of all major command headquarters must be able to anticipate the additional burden placed on the logistics support system.

9. Impact of CBR Operations

In order to obtain an adequate CBR readiness posture some of the areas that will require detailed consideration are—

a. Supply of chemical and biological weapons increases the requirements for handling of weapons and equipment and for resupply or replacement of defensive equipment and materiel.

b. Maintenance problems increase when the enemy employs chemical and biological weapons since equipment and materiel are contaminated. This will require the use of specialized chemical and biological defensive equipment and materiel.

c. Transportation problems are increased since movement of chemical and biological weapons and munitions introduces special problems in the areas of safety, security, and handling. Enemy chemical and biological operations in rear areas will cause large areas and materiel to be contaminated with chemical agents. The effectiveness of the transportation system will be reduced since traffic must be routed to avoid the contaminated areas.

d. CBR specialists will be required to plan and provide support for CBR operations at all major headquarters.

e. Chemical and biological employment plans must be prepared in advance in appropriate detail and kept current.

f. Prior to the initiation of CBR operations, the commander must assure that his combat, combat support, and combat service support forces are CBR-trained, equipped, and psychologically prepared to carry out their mission in a chemical, biological, and nuclear environment. CBR staff services must be maintained at all times to meet the threat and implication of chemical, biological, and nuclear operations or any combination thereof in conjunction with conventional warfare in any theater of operations.

g. The impact of chemical and biological operations described in *a* and *b* above, can reasonably be extended to include employment of nuclear weapons and attendant radiation.

h. CBR operations can be conducted on such a large scale that CBR staff services will have to be provided for all commands to insure operational and materiel readiness for continuation of the mission by timely and responsive recovery.

10. Responsibilities

The responsibilities and functions in CBR operations are complex and numerous, and cannot be handled on an additional duty basis by staff sections without integration of adequate personnel charged with their accomplishment.

a. Balanced integration of chemical personnel within staff sections is required to assure the accomplishment of the following:

(1) Functional capacity.

(2) Capability for round-the-clock operation.

(3) Availability to meet peak loads.

(4) Ability to displace to a new headquarters location without ceasing operations.

b. The responsibilities and functions of CBR staff personnel in the field army are prescribed below. These responsibilities of chemical staff and associated staff's are applicable to all levels regardless of future staff designation.

(1) Assist in the planning and coordination of offensive and defensive CBR operations.

(2) Provide technical knowledge of storage and distribution of chemical and biological munitions and materiel.

(3) Plan and recommend requirements for and employment of chemical troops.

(4) Prepare the CBR portion of the training program and assist in exercising staff supervision of CBR training throughout the command.

(5) Plan and coordinate the following CBR operations:

(*a*) Monitoring and decontaminating contaminated areas, installations, and materiel.

(*b*) Chemical detection and radiological surveys.

(*c*) Advise on CBR defense.

(*d*) Provide fallout prediction as required.

(*e*) Provide prediction of casualty producing effectiveness of and degree of hazard from CBR agents.

(*f*) Use of chemical (toxic, smoke, flame, and incendiaries) and biological agents in tactical operations.

(*g*) Chemical technical intelligence.

(*h*) Assist in planning chemical participation in barrier and denial operations.

(*i*) Disseminate CBR contamination information as required.

(*j*) Maintain the CBR situation map.

(*k*) Technical inspection, recovery, evacuation, maintenance, and reclamation of chemical materiel beyond the capabilities of using units.

c. The responsibilities and functions of CBR personnel within the theater army support command (TASCOM) and field army support command (FASCOM) organizations are specifically oriented toward the following:

(1) Acquisition, storage, and distribution of chemical and biological ammunition and chemical and biological materiel.

(2) Maintenance of chemical and biological materiel in the hands of user activities.

(3) Technical escort of hazardous chemical and biological ammunition and radioactive waste.

(4) Recovery, classification, evacuation, salvage, and disposal of chemical and biological materiel.

(5) Surveillance, renovation, and disposal of chemical and biological ammunition after coordination with ammunition representatives.

(6) Management of chemical and biological materiel.

(7) Modification of chemical and biological materiel as directed.

(8) CBR operational and training aspects to include the area damage control center.

(9) Supervision of CBR decontamination of critical areas and supplies.

(10) Technical advice to units on processing of permeable type protective clothing through impregnation or reimpregnation.

(11) Technical supervision of subordinate CBR organizations.

(12) CBR technical intelligence.

Section II. CBR STAFF SERVICES

11. General

CBR staff services at corps, field army headquarters, field army support command headquarters, theater army support command headquarters, army group and theater army headquarters are integrated into the general/director staff sections and also within the subordinate major elements that are assigned to these headquarters.

12. Field Army Headquarters

The duties of the chemical officer and chemical personnel at field army (TOE 51–1) are predominantly operational rather than logistical in nature. The chemical personnel are distributed among the general staff; specifically, the G–2, G–3, and G–4. A sustained 24-hour capability in a CBR operational environment is not inherent in the manning level of this TOE. In order to possess a two-shift sustained operating capability, a CBRE, Team JA, TOE 3–500 will be required.

13. Field Army Support Command (FASCOM) Headquarters

This headquarters is organized under TOE 54–12T. The chemical personnel are located in the Assistant Chief of Staff (ACofS), Security, Plans and Operations; ACofS, Supply; and ACofS, maintenance divisions. The chemical personnel in conjunction with engineer personnel operate the area damage control center (ADCOC). These personnel maintain, plot, and display forecasts or current information on nuclear bursts, radiological fallout, tree blowdown, chemical and biological contamination, and other residual effects of mass destruction weapons as well as damage due to natural disaster. Included in its mission is the maintenance of a current situation map showing unit locations, routes, and conditions. It is the receiving point for reports coming to the (FASCOM or support brigade) headquarters. The TOE provides adequate chemical personnel to perform chemical supply and maintenance staff services for the headquarters.

14. Support Brigade Headquarters

This organization is organized under TOE 54–22T. The staff structure and chemical personnel in this headquarters operate and function the same as FASCOM headquarters. Sufficient chemical personnel are assigned to operate an ADCOC on a 24-hour basis.

15. General Support Group Headquarters

This organization is organized under TOE 29–102F. One chemical officer is assigned as the rear area security control (RASC) officer in the security, plans, and operations section of this headquarters. He also furnishes advice to the commander on CBR matters.

16. Theater Army Support Command (TASCOM)

The CBR staff-personnel of the TASCOM headquarters are responsible for developing and providing CBR operation plans, policies, and recommending service and equipment priorities and allocations to the subordinate operating commands within the scope of their parent staff assignment. These functions and responsibilities are fulfilled by analyzing CBR area damage, operation, services, maintenance, and supply reports submitted by lower units. The CBR staff services will be limited and will not need an ADCOC capability to carry out its assigned functions. Specific functions and operational concepts at the Headquarters, Theater Army Support Command (TOE 54–302) are contained in paragraph 17.

17. Functions of TASCOM Headquarters

a. ACofS, Security, Plans and Operations. Chemical-biological-radiological (CBR) advice is provided by—

(1) Preparation of broad planning, guidance, policies and programs pertaining to CBR activities of subordinate organizations, operations and functions.

(2) Development of the chemical portion of troop lists.

(3) Development of CBR portion of the operations order.

(4) Development of CBR policies, plans, and guidance for evaluation of training of the command.

(5) Plans, policies and procedures for the CBR responsibilities in rear area security and area damage control.

b. ACofS, Services, Installation and Field Service Branch. CBR advice is provided in—

(1) Preparation of policies and plans for coordination and supervision of activities in the areas of construction, communications, transportation and for CBR services, field services, and graves registration. Close coordination is required between the CBR staff member and other staff members in the provision of adequate and timely decontamination support, processed clothing support, and area damage control support.

(2) Development of the services portion of the command administrative order.

(3) Development and changes for the troop basis and changes to TOE pertaining to service units.

(4) Development and recommendation of priorities in conjunction with other coordinating staff sections for services provided.

(5) Development of policies and plans for provision and location of laundry and bath facilities, frequency of usage, and criteria for the establishment of clothing exchange operations.

(6) Installation support plans, policies and procedures.

c. ACofS, Supply, Plans and Operations Branch. CBR advice is provided in—

(1) Development of policies, plans, and programs and coordination and supervision of supply activities, including salvage and property disposal.

(2) Development of the supply portion of the command administrative order.

(3) Establishment of supply levels based on directives of higher headquarters.

(4) Policies, priorities, allocations, and criteria for controlled items.

(5) Local procurement plans and policies.

(6) Evaluation of summary management reports.

(7) Review and approval of supply procedures (requisition, issue, storage, accounting, and modifications thereto).

(8) Review and approval of proposed stockage lists and policies for subordinate commands at direct support level.

d. ACofS Maintenance. CBR advice is provided in—

(1) Establishment of plans, policies, and procedures for maintenance support services in the area support command (ASCOM) mission area (excludes maintenance support provided by field depot complexes).

(2) Maintenance matters falling within the ASCOM's area of operational responsibility.

(3) Requirements for, and recommendations on allocation and disposition of maintenance support units, personnel and materiel.

(4) Operational control over the Maintenance Management Center.

(5) Maintenance data collection effort.

(6) Policy and procedural guidance for the evacuation, classification, disposition, and salvage of captured, abandoned and unserviceable CBR materiel.

(7) Formulation of guidance for development of inspection plans to insure efficient ASCOM maintenance support.

(8) Establishment of maintenance standards for inspection.

18. Area Support Command (ASCOM) Headquarters

This headquarters is organized under provisions of TOE 54–402T. The CBR staff mission, functions, and operational concepts in the area support command headquarters are as indicated below:

a. ACofS, Security, Plans, and Operations. CBR advice is provided in—

(1) Preparation of broad planning guidance, policies and programs pertain-

ing to command organizations, operations and functions.

(2) Development and maintenance of troop lists.

(3) Development of the command operations order.

(4) Development of policies and guidance for and evaluation of training of the command.

(5) Plans, policies and procedures for rear area security and area damage control.

b. ACofS, Services, Installations and Field Service Branch. CBR advice is provided in—

(1) Preparation of policies and plans for, coordination and supervision of activities in the areas of construction, communications, transportation and for CBR services, field services and graves registration. Close coordination is required between the CBR staff member and other staff members in the provision of adequate and timely decontamination support, fire support, bath support and area damage control support.

(2) Development of the services portion of the command administrative order.

(3) Development and changes for the troop basis and changes to TOE pertaining to service units.

(4) Development and recommendation of priorities, in conjunction with other coordinating staff sections, for services provided.

(5) Development of policies and plans for provision and location of laundry and bath facilities, frequency of usage, and criteria for the establishment for clothing exchange operations.

(6) Installation support plans, policies and procedures.

c. ACofS, Supply. CBR advice is provided in—

(1) Development of policies, plans and programs and coordination and supervision of supply activities, including salvage and property disposal.

(2) Development of the supply portion of the command administrative order.

(3) Establishment of supply levels based on directives of higher headquarters.

(4) Policies, priorities, allocations and criteria for controlled items.

(5) Evaluation of summary management reports.

(6) Review and approval of supply procedures (requisition, issue, storage, accounting, and modifications thereto).

(7) Review and approval of proposed stockage lists and policies for subordinate commands at direct support level.

d. ACofS, Maintenance. CBR advice is provided in—

(1) Establishment of plans, policies and procedures for maintenance support services in the ASCOM mission area (excludes maintenance support provided by field depot complexes).

(2) Maintenance matters falling within the ASCOM's area of operational responsibility.

(3) Requirements for and recommendations on allocation and disposition of maintenance support units, personnel, and materiel.

(4) Policy and procedural guidance for the evacuation, decontamination, classification, and salvage of captured, abandoned and unserviceable materiel.

(5) Formulation of guidance for development of inspection plans to insure efficient ASCOM maintenance support.

(6) Establishment of maintenance standards for inspection.

19. Area Support Group Headquarters (TOE 54–422T, Headquarters & Headquarters Company, Area Support Group)

Since the functional areas of the directors of security, plans, and operations; services; supply; and maintenance, generally parallel those of the general staff sections of the area support command they will not be repeated. Further, it is realized that the scope of the staff

will be more limited except in the area of rear area security and area damage control (RAP). The responsibility for collecting and analyzing rear area damage by enemy CBR operations is a function of the area support group.

CHAPTER 3

SUPPLY

20. General

a. The Theater Army Support Command (TASCOM) is responsible for providing CBR combat service support to army forces in a theater of operations and to other forces as designated. Services provided include—general support to the field army, direct and general support to the communications zone, and rear area security and area damage control within the communications zone.

b. CBR combat service support functions performed by TASCOM include—maintenance, supply, and miscellaneous services.

21. Mission

TASCOM is responsible for coordinating the activities of subordinate operating commands and for providing them with overall plans, policies, and priorities for the allocation of CBR combat service support to army forces in a theater of operations and to other forces as designated, including rear area security and area damage control of the communications zone (COMMZ).

22. Responsibility for Supply

a. The Supply and Maintenance Command (SMC), a major functional element of TASCOM, is responsible for insuring maximum efficiency and economy in providing CBR services, equipment, materiel, and maintenance support to U.S. forces and to other forces as directed.

b. The Field Army Support Command (FASCOM) provides supply support for the field army.

23. Supply Management

Centralized control of all CBR supplies is provided by inventory control centers (ICC's), within the field army and COMMZ, using automatic data processing (ADP) equipment and associated communications systems. Centralized stock control centers are also located at corps and army support brigades.

24. CBR Supply in a Theater of Operations

a. All CBR equipment and materiel in the COMMZ will be supported by subordinate units of the SMC which are functionalized and commodity oriented. The logistics system eliminated the need for separate technical service operated depots, supply points, and maintenance facilities. Chemical supply and maintenance units and personnel (app B) have been integrated into subordinate units within the SMC.

b. CBR supply support within the field army is provided by FASCOM brigades.

c. Flow of requisitions and supply distribution are shown in figure 1. From division support commands and nondivisional direct support (DS) units, supply requisitions in MILSTRIP (AR 725–50) format will be transmitted by a digital comunications system to the appropriate brigade stock control center (SCC). Shipping instructions will be transmitted to a general support (GS) supply storage unit. If the required items are not indicated as available by a particular brigade stock control center, the requisitions are passed by electronic communication to the FASCOM ICC. Depending upon the situation, the FASCOM ICC may direct shipment from a support brigade that has the item, or pass the requisition to the TASCOM SMC ICC for action. The SMC ICC will issue instructions for shipping to the TASCOM field depots, back ordering at the SMC ICC, or passing the requirement to CONUS.

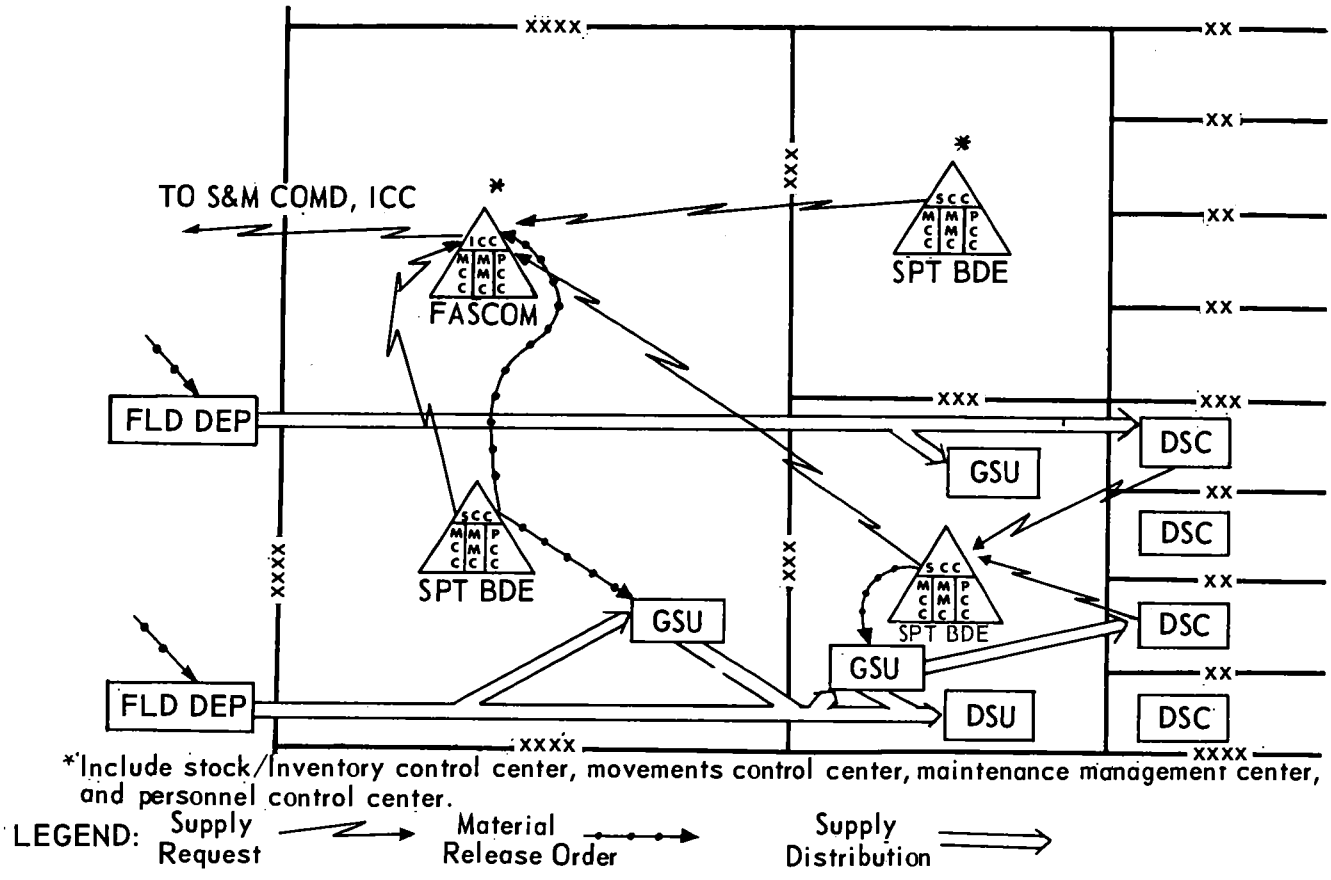

Figure 1. Requisition and distribution of supplies in FASCOM.

d. Provisions for the uninterrupted functioning of the supply system in TASCOM are indicated in figure 2. Minimal loss of effectiveness of the supply system is expected. Alternate ADP facilities contained in FASCOM are shown in figure 3.

(1) When necessary, the FASCOM ICC serves as the alternate for any one of the brigade SCC's. In order to accomplish this mission, the brigade SCC provides the FASCOM ICC periodic *summary* information from brigade general support units (storage locations) covering issues, receipts, adjustments to on-hand balances, due-in orders, and back orders. *Detailed* information is provided the ICC on a weekly or semi-monthly basis on back orders by requisitioner and on due-in orders by requisition.

(2) Similarly, the army support brigade SCC serves as an alternate for the FASCOM ICC. The SCC will be provided sufficient information, along with the ICC programs and necessary machine capability, to assume the duties of the FASCOM ICC and function on a reduced scale for a limited time until operation of the ICC is restored.

(3) The Area Support Command Computer Center serves as alternate for the SMC ICC in TASCOM. The Area Support Command Computer Center will be provided the SMC ICC programs and sufficient information to function for the SMC ICC for a limited period of time.

(4) If alternate ADP facilities are not available below FASCOM, scheduled

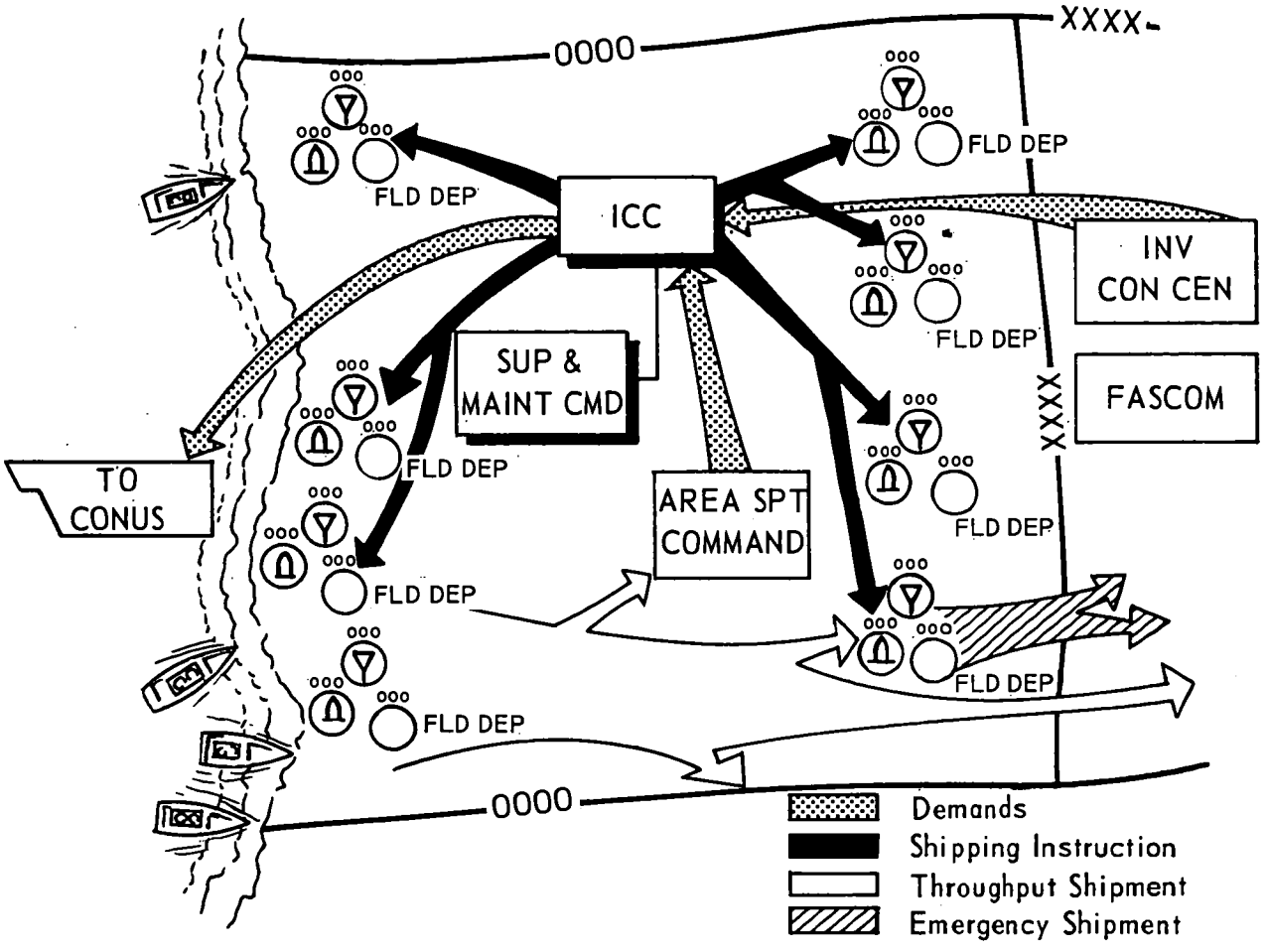

Figure 2. Supply flow schematic.

periodic ADP printouts from the brigade SCC or the ICC will be used. These listings, provided to supply managers and storage sites, may be used for short periods in a manner similar to manually kept stock records. When this situation occurs, requesting organizations will go directly to the storage locations rather than to the SCC or the SMC ICC.

(5) In conflicts involving chemical, biological, or nuclear operations, contact between combat units and forward supply units may be broken long enough to warrant emergency resupply. In this situation, GS units in the army service area or in TASCOM forward field depots will ship predetermined survival supplies to the affected forward area, based on direction of the FASCOM or the SMC ICC.

25. The Supply System as a Target

a. Within an eight-division field army, there are three support brigades, six support groups, and nine supply and service battalions, each having a number of supply and service companies. Although each of these supply and service battalions normally has predesignated customers which it supports, the SCC and/or FASCOM ICC may direct shipment from any one of these sources to any consignee, when required. With this number of logistical organizations and with maximum dispersion of

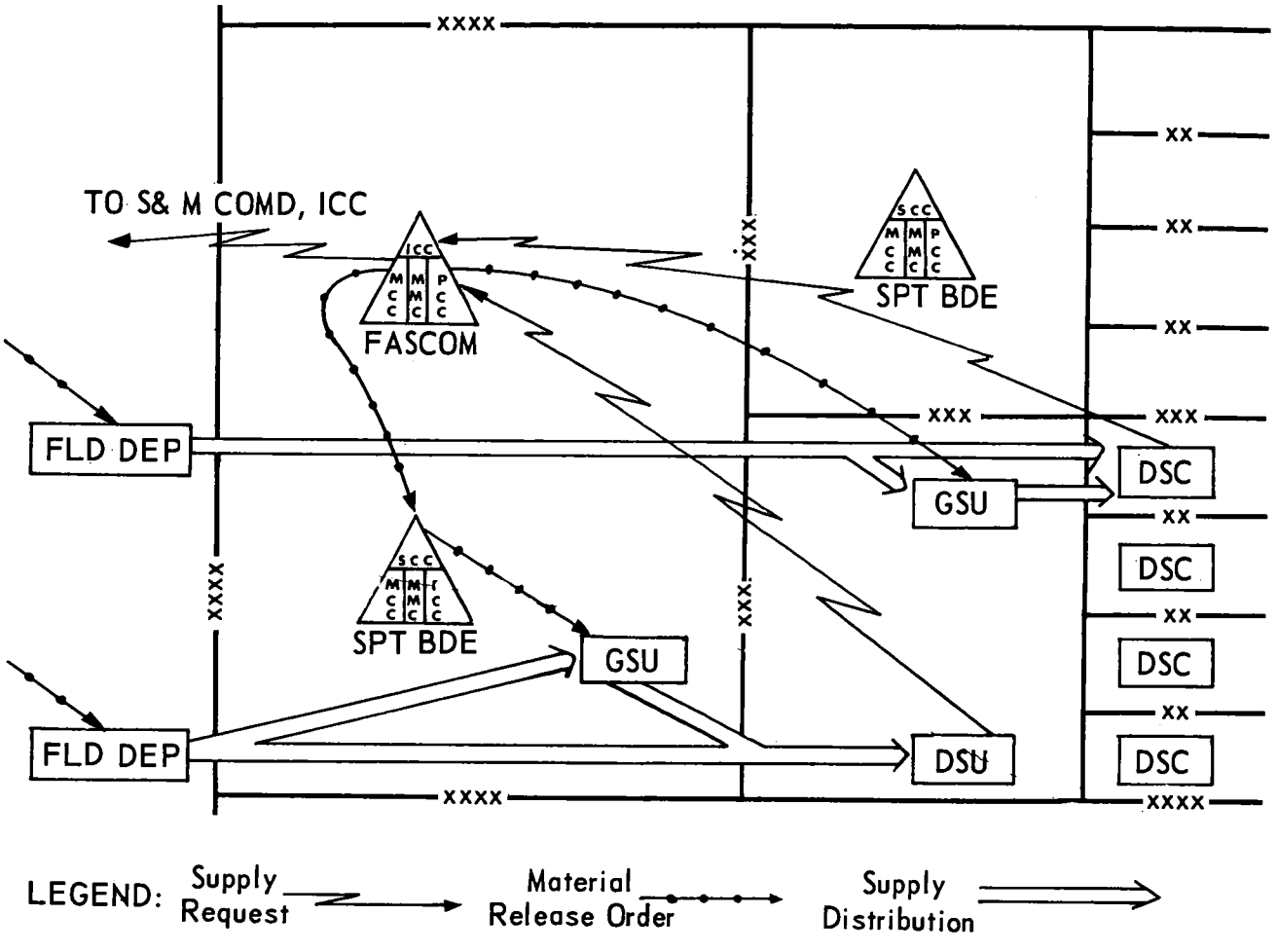

Figure 8. Alternate requisition procedure.

relatively small targets, vulnerability to chemical and biological attacks is reduced and serious loss of logistical capability is not anticipated.

b. If enemy action results in the contamination of supplies at storage locations in FASCOM, standardized ADP programs at the SCC and the ICC permit the "temporary elimination" of storage locations. The SCC or the ICC can then direct shipments from other storage locations or take passing action and still satisfy the customer's requirements. If no uncontaminated stocks are available, shipment of contaminated stocks can be directed. These stocks would require decontamination prior to issue. When stocks are decontaminated, or sufficient time has elapsed for weathering to reduce the contamination to a safe level, they again become assets for release as required by the brigade SCC or the FASCOM ICC. Use of covered storage for protection of stocks will minimize contamination of stocks and reduce decontamination requirements.

c. Within the COMMZ supporting an eight-division force, there normally will be six field depots. Field depots in the communications zone constitute the supply base for the theater army, and should hold at least 20 days of complete stockage. These depots are strategically dispersed throughout the COMMZ. Also, the storage and maintenance facilities within the field depot complex are widely dispersed. For example, a typical field depot might be deployed within an area 20 by 30 kilometers (600 square

km). The Supply and Maintenance Command ICC will maintain centralized control over all these depot assets. The SMC ICC can temporarily suspend shipments from any given field depot or storage location in the depot, and can make shipments from available stocks within other field depots.

d. An adequate transportation system will be provided to move supplies from storage locations to appropriate delivery points as required in all operational situations discussed above.

26. Concepts of Operations

a. Recovery and evacuation of Class II and IV materiel are the initial responsibilities of the unit that owns or finds the materiel. Clothing, footwear, and launderable textile items will be evacuated to supply and service units. All other repairable items will be evacuated through maintenance channels. Excess supplies and scrap will be reported through supply channels and will be evacuated by the most direct and economical means to designated installations in the COMMZ. Units having essential repairable items of equipment that are contaminated beyond the unit's capabilities to decontaminate this equipment should request decontamination assistance from the next higher headquarters. Expendable items of equipment that are contaminated beyond a units' decontamination capabilities will be destroyed (ch 7). Nonexpendable contaminated items will be reported to the next higher headquarters for recovery when the area in which they are located is safe to enter. Handling uncontaminated protective clothing and related equipment requires no special procedures or techniques. Contaminated clothing will be handled in the following ways:

(1) Expendable or disposable type garments will be destroyed, discarded, or buried at the earliest opportunity.

(2) Durable web equipment that can be safely handled will be returned to laundry facilities for decontamination. If web equipment is grossly contaminated, it should be destroyed.

b. The addition of chemical and biological defensive supplies to the logistical system will not have a large impact, since protective clothing, equipment, and supplies may be expected to amount to only two percent of the total tonnage handled by the supply system. This percentage of the overall supply workload could be doubled or tripled with little effect on the TASCOM supply system.

27. Limited War Operations

a. CBR supply planning lacks valid experience data for the wide variety of environments in which limited war operations may occur. Such operations may at times require consideration of support for smoke, flame, tunnel flushing operations, dissemination of riot control agents, defoliation and destruction of guerrilla food supplies. The need for special CBR items of equipment for limited war operations must be anticipated early.

b. Security of supply and maintenance installations is critical. Not only must supplies be conserved for friendly consumption, but they must be denied hostile forces that may operate in rear areas. Rear area protection is discussed in chapter 8.

CHAPTER 4

CHEMICAL MAINTENANCE

Section I. INTRODUCTION

28. General

This chapter describes the general operational and organizational concepts for maintenance of chemical equipment in a theater of operations. Also included is a brief discussion regarding the maintenance float and repair parts supply applicable to the chemical maintenance function.

29. Maintenance Policy

The theater army maintenance policy is governed by the following basic principles for maintenance service.

a. Maintenance is a command responsibility and continues from the lowest organizational commander up through each echelon of command, including the theater commander. It is applicable at all levels of command regardless of the type of unit or the equipment involved.

b. To the maximum extent practicable, a single source of (DS) maintenance service, including repair parts, will be furnished the user. Within the combat divisions this single source of maintenance service will be from one of the designated companies of the division maintenance battalion. Within the remainder of the field army area, the single source of maintenance service will be provided by a designated maintenance company assigned to one of the maintenance DS battalions of the support group. The single source of maintenance service for using organizations within the (COMMZ) may be a designated maintenance support company in the area support group, or a maintenance company located in the field depots.

c. Direct support repair will be accomplished by the replacement of serviceable for unserviceable components and/or repair parts where practical. This principle is designed to reduce the need for evacuation of unserviceable items and at the same time minimize the number of items required in the maintenance float. It capitalizes on the standard assembly or component, thus conserving and centralizing tools, facilities, and skills used in their repair. This principle will be supported by the mobile maintenance team concept for "on-site" replacement and exchange of major and minor components.

d. Maintenance will be performed at the lowest level possible. This principle is designed to reduce unnecessary evacuation of equipment to a higher level maintenance unit.

e. Mobile maintenance teams will be employed to the maximum extent possible for "on-site" maintenance. These teams will carry a small stock of fast moving repair parts and where practicable, will operate on a scheduled basis. Examples of teams that can be employed in this manner are office machine repair teams, small arms repair teams, mechanical equipment repair teams, and calibration teams.

f. Maintenance service will be provided on an area basis as well as on an assigned unit basis. This will assure that all areas within the theater of operations are included within the overall maintenance support plan. Area support responsibility will include emergency wrecker service, maintenance road patrols, assistance in battle field recovery, and appropriate contact maintenance service.

g. Maintenance management elements will be established with minimum control personnel and will utilize ADP equipment provided by the automatic data systems within the Army in

the field (ADSAF). Maintenance and materiel status data will be collected and analyzed to provide management for the various functions of maintenance. The summary data will be used by the maintenance managers, supervisors, commanders, and staff elements. The goal is to provide a significant management tool upon which to base decisions and to provide information on the status of maintenance. Also it will provide a means for the efficient and economical management of the maintenance effort, to include the provision of a determination factor for use in forecasting maintenance requirements and the status of maintenance readiness.

30. Responsibilities

Maintenance staff functions at the TASCOM level are primarily concerned with planning for future operations. The supply and maintenance command and the area support command assigned to TASCOM are primarily concerned with current maintenance operations within the COMMZ.

31. TASCOM Support Functions

COMMZ maintenance support is provided from two sources.

a. For units assigned, attached or passing through the COMMZ, maintenance support is provided by maintenance support companies, COMMZ, assigned to maintenance battalions of the area support groups. Maintenance service provided includes DS level maintenance for all types of equipment. Equipment beyond the repair capability and/or time repair limits of the maintenance companies is evacuated to a field depot collecting point.

b. DS and GS level maintenance support for equipment in storage in the field depots and GS maintenance back up support for overflow maintenance from the field army and COMMZ, is provided by maintenance battalions in the field depot.

c. Collection and classification is performed on an "as required" basis by the Collection and Classification Company (TOE 29–139G). The procedure for handling CBR contaminated materiel and equipment is discussed in chapter 7.

d. The supply and maintenance command staff determines repair priorities for critical items and items in short supply and furnishes the field depots with the requirements. Repaired equipment is returned to stock and reported to the supply and maintenance command inventory control center (ICC) as depot assets. The maintenance companies assigned to the field depots accomplish required modifications on equipment carried in depot stocks.

e. Maintenance functions referred to thus far are provided by functionalized maintenance support units. A requirement exists within COMMZ for utilization of some commodity oriented maintenance units. The nature of the missions of these units does not permit the use of completely functionalized maintenance organizations. Examples of units in this category are specialized maintenance units for support of communications centers and communications relay stations, maintenance units for construction groups, pipeline maintenance units and maintenance units for marine and railway equipment. These type units do not maintain chemical equipment.

f. Depot maintenance (rebuild) of end items will not normally be performed in the theater. If depot maintenance is authorized within the theater, it will be performed in the COMMZ by local-hire labor, using existing commercial facilities and will be under the supervision of the supply and maintenance command.

32. Field Army Zone

a. The FASCOM maintenance staff is responsible for the overall coordination of maintenance support and maintenance management within the field army. This includes a determination of repair priorities for critical items, and items in short supply. Maintenance support within the field army area is provided by the FASCOM for units other than the combat divisions. The division support command provides direct support maintenance within the combat divisions.

b. Maintenance support provided by FASCOM is accomplished by DS and GS maintenance battalions assigned to support groups in the corps support brigades and the army support brigade.

c. Elements of the DS maintenance battalion

serve as the source of customer supply organizational repair parts. Recoverable repair parts are furnished to the customer on a direct exchange (DX) basis. Deadline and/or emergency requisitions will be filled on an individual basis, immediately upon receipt. Requisitions for repair parts will be initiated by all DS and GS maintenance units directly upon the support brigade stock control center (SCC).

d. Each maintenance unit of the DS maintenance battalion will maintain a float of combat critical end items of equipment. Policies for the control of the maintenance float are established by theater army and implemented by TASCOM and FASCOM. The maintenance float will not be used as a supply source but will be used to insure that users are not deprived of end items awaiting DS maintenance over an excessive period of time.

e. End items that are beyond the repair capabilities of the DS maintenance unit or uneconomically repairable at the DS level will be turned in by the using unit and a replacement requisitioned through normal supply channels. Equipment beyond the repair capability and/or repair time limits of the DS maintenance companies is evacuated to designated GS maintenance units as directed by the maintenance management center (MMC).

f. General support maintenance battalions provide GS level, maintenance service and overflow DS maintenance service for the combat divisions and nondivisional DS maintenance units. The GS maintenance battalions assigned to the army and corps support groups are tailored to provide maintenance support depending on the type of units and equipment found in the respective areas. Because the requirements are different, the makeup of the battalions is also different. The total of all the GS maintenance companies assigned to a support group is divided between the maintenance GS battalions.

g. The combat divisions will normally depend upon FASCOM transportation for evacuation of equipment, utilizing empty trucks going rearward. Evacuation equipment organic to the GS maintenance units may be utilized to assist equipment when required.

h. Collection and classification companies (TOE 29–139G) are assigned on the basis of one per each support brigade.

i. The maintenance mission of the maintenance elements located in the field army is oriented towards repair and/or overhaul of major components of large end items such as trucks, tanks, construction equipment and materiels handling equipment, and the repair of smaller items such as small arms, instruments and power generators. Overhaul as used here refers to the inspection and repair only as necessary (IROAN) concept. As an exception, and as the component repaid and/or overhaul workload will permit, large type end items may receive overhaul at the GS level when such items are combat essential and critical to support operations. Maintenance units providing GS maintenance will employ the assembly line technique whenever possible to facilitate this practice, it will be necessary to centralize the repair of certain components in selected companies.

Section II. ORGANIZATIONAL CONCEPTS

33. General

Maintenance support is based on the support requirements of a single, eight-division field army with the capability of expansion to support twelve-division force. The maintenance support described in this chapter provides for tailoring to support an independent corps or a separate division force. Tailoring is essential since these major forces are specially structured for operations, including CBR operations, in varying environments against selected opposing forces.

34. Headquarters

The TASCOM headquarters will direct the maintenance service for the communications zone, while headquarters, field army support command (FASCOM) will direct the maintenance service in the field army.

35. Maintenance Service

Throughout the theater, maintenance service will be provided by functionalized maintenance units. For instance, identical headquarters and headquarters detachments are used for all GS

maintenance battalions in the field army and those COMMZ maintenance battalions assigned to area support groups and field depots. Platoons of the various maintenance companies in both the COMMZ and field army have like or similar capabilities and designations.

Section III. COMMUNICATIONS ZONE

36. General

The area support command and the supply and maintenance command provide DS and GS maintenance services in COMMZ.

37. Area Support Group, Area Support Command, COMMZ

The area support group, area support command provides DS maintenance support to TASCOM mission services and other forces in the COMMZ as directed by the Area Support Command. The area support group is a composite multifunctional organization specifically tailored for a particular mission. Maintenance support is furnished by the maintenance support companies in the maintenance battalion.

38. Maintenance Battalions

a. Mission. The maintenance battalion (TOE 29–136) provides DS maintenance for all items less Class V, medical, cryptographic, army security agency materiel, airdrop equipment, and light textile and footwear.

b. Organization. The maintenance battalion consists of the headquarters and headquarters detachment, several maintenance support companies (COMMZ) and one or more transportation aircraft maintenance DS companies. DS support maintenance for chemical equipment is furnished by the maintenance support company (COMMZ) (TOE 29–427).

c. Operation. The maintenance battalion operates on an area wide basis and provides maintenance service for units attached to or passing through the area. It normally provides service to about 15,000 personnel. Maintenance support companies are located throughout the area support group's area of operations in accordance with the location of units or density of equipment supported. Equipment beyond the repair capability and/or time repair limits of the maintenance companies is evacuated to a field depot collection point or performed by cellular type repair teams which may be attached to the unit.

39. Supply and Maintenance Command, TASCOM

a. Mission. The supply and maintenance command provides depot supply and maintenance support to theater army and such other elements of the theater as may be designated.

b. Organization. The supply and maintenance command consists of a headquarters and special troops, headquarters support activities (such as an inventory control center, a maintenance management center, and an automatic data processing center), and several major subordinate commands—ammunition group, petroleum group, procurement centers, and field depots. Maintenance support for chemical equipment is provided by the field depots.

(1) *Field depots.* The field depot is functionalized, nonbranch-oriented, and tailorable. Maintenance units are assigned according to depot missions and workloads. These include light equipment general support maintenance companies (TOE 29–134), heavy equipment general support maintenance companies (TOE 29–137), aircraft base maintenance companies, tire repair companies, rail and marine equipment repair companies and collection and classification companies (TOE 29–139), all of which are assigned to the field depot on an as required basis. Maintenance support for chemical equipment is furnished by the light equipment and heavy equipment general support maintenance companies.

(2) *Light equipment general support maintenance company (TOE 29–134).* The light equipment general support maintenance company provides GS maintenance for light equipment end items and components of chemical, engineer, quartermaster, and signal equipment. The company operates on an area or unit basis compatible with

that of the field depot and is usually assigned in general support of all light equipment located within a portion of the field depot's area of responsibility. Chemical equipment supported is normally limited to light, unmounted, hand-operated, portable type items.

(*a*) Light equipment GS maintenance companies may receive work from overflow DS maintenance and GS maintenance from maintenance battalions in the field army and the area support groups, from equipment in storage in the field depot, from collecting points, and from other light equipment GS maintenance companies as a result of workload cross-leveling. Workload is directed into and out of the company by the supply and maintenance command headquarters.

(*b*) General support maintenance of light chemical equipment is performed by the chemical repair section of the company. Bench or assembly-line production methods are normally used depending on the characteristics of the item being repaired, the quantity of such items, and field depot policy regarding assembly-line operations. The chemical equipment repair section may be operating within the company at one time, may be augmented for performance of an increased maintenance load at another time, or may be detached and temporarily attached to another company for operations at still another time.

(3) *Heavy equipment support maintenance company (TOE 29–137).* The heavy equipment general support maintenance company provides GS maintenance for heavy equipment end items and components thereof, including repair of heavy chemical equipment. The company operates on an area or unit basis in a manner similar to that indicated above for the light equipment general support maintenance company. Specific types of chemical equipment supported by this company include both end items and components of vehicle-mounted equipment. Heavy equipment general support maintenance companies receive work in a manner similar to that indicated above for light equipment GS maintenance companies. General support maintenance of heavy chemical equipment is performed by the special equipment repair section of the company. The company is primarily designed to repair components on an assembly-line basis when practical. However, because of the nature of the equipment to be repaired, repair of heavy chemical equipment normally employs bay or job shop type operations. As was the case with the light equipment GS maintenance company, the platoons and section of the company can be augmented, or they may be detached for temporary attachment to another heavy equipment GS maintenance company for the performance of assembly-line maintenance.

Section IV. FIELD ARMY

40. General

Maintenance support within the field army support command (FASCOM) is provided by maintenance units assigned or attached to corps and army support brigades. Maintenance of chemical equipment is accomplished by direct support and general support maintenance battalions in the support groups under the corps support brigades and the army support brigade. Maintenance support is predicated on the concept of exchange of serviceable for unserviceable components at DS level and the inspect, repair only as necessary (IROAN) concept at GS level. DS maintenance units will concentrate on component replacement and return of major end items to the user. GS maintenance units will repair components and return the repaired components to the supply system. Elements of

the DS maintenance battalions serve as the source of customer supply for organizational type repair parts. The general support maintenance units will only maintain repair parts as required for their work programs. Each maintenance unit of the direct support maintenance battalion will maintain a maintenance float. Policies for control of the float will be established by theater army.

41. Division Maintenance Battalions

a. Mission. The maintenance battalion, division support command, is the direct support unit organic to the division which performs for the division the inspection of organizational maintenance, repair parts DS supply, and DS repair of equipment. It provides a maintenance float of selected items for direct exchange, provides evacuation service, and operates maintenance collection points.

b. Organization.

(1) *General.* The contact point in the division for all DS maintenance activities in support of the chemical equipment in the division is the designated support company. However, the forward support companies do not have a repair capability for chemical equipment and therefore evacuate these items to the main support company.

(2) *Main Support Company.* This company operates in the division rear support area and provides direct support maintenance service to all elements of the division as well as emergency DS maintenance service to nondivisional units operating in the division rear area. It provides backup support for the forward support companies. It operates the main division maintenance collecting point and provides evacuation service for the materiel it supports. It provides technical supervision over the conduct of maintenance functions in the division. It maintains the maintenance float and operates a direct exchange service for selected items. This company may not have enough chemical equipment repairmen to perform the required DS repair of the divisions' chemical equipment, necessitating diversion of repair to elements of FASCOM corps support brigades.

42. Support Brigades

a. General. The support brigade provides, within assigned areas of responsibility, combat service support to divisions and nondivisional units. A support brigade may be employed as a corps or army support brigade in the FASCOM, depending on the portion of the army area of operations in which it is located. Services performed by the support brigade include maintenance of chemical equipment. The organization of the support brigade varies with the assigned mission, workload, and units made available to it by FASCOM. In general, each of the organizations in the support brigade are organized on a "building-block" principal to permit maximum tailoring and flexibility of employment. For example, they are self-sufficient as separate TOE units, they may be augmented by type teams, they may be adjusted in size by reducing to the eighty or ninety percent TOE strength levels, or they may be grouped together in various configurations as required to support a wide variety of force structures.

b. Maintenance Services. As previously indicated, maintenance support in the FASCOM is accomplished by direct and general support maintenance battalions assigned to support groups in the corps and army support brigades. The organization for direct support and general support maintenance of chemical equipment will be discussed separately.

43. Direct Support Maintenance Battalion

a. Mission. The direct support maintenance battalion (TOE 29–136) provides direct support maintenance, limited evacuation, and maintenance supply and repair parts support to nondivisional units in the field army. It provides technical assistance to supported units and assists in the performance of organizational maintenance which is beyond the capability of the supported units.

b. Organization. Maintenance support for chemical equipment is furnished by the main support company (TOE 29–206) and the light maintenance DS companies (TOE 29–207).

c. Operation. The maintenance battalions normally operate on an area basis. The light maintenance companies are deployed throughout the support area, oriented on equipment densities. The main support company reinforces the light maintenance companies and is generally located at the point of greatest equipment density in the battalion area of responsibility. Supported units place demands for repair parts on the light maintenance company assigned for their direct support. The light maintenance company responds to demands by making direct exchange and/or issue of repair parts. Chemical equipment beyond the repair capability and/or repair time limits of the light maintenance company is evacuated to the main support company. Chemical equipment beyond the repair capability of the main support company is evacuated to designated maintenance general support units.

44. General Support Maintenance

a. Characteristics of General Support Maintenance.

(1) General support maintenance is primarily established for, and functions more efficiently and productively in the performance of maintenance that exceeds the capability of supported units. The distinction between DS and GS maintenance is largely one of more time and facility available at the GS level because of less frequent movement requirements.

(2) General support maintenance units remain in one location for longer periods, expend more time on performance of maintenance tasks, stock greater variety and quantities of repair parts, augment productive capacity by utilizing civilian labor, utilize more elaborate structures and equipment for performance of shop operations, and use productive techniques (e.g., assembly-line production) which are not normally practical at DS maintenance level. Conversely, DS maintenance units must retain the mobility and responsiveness essential to efficient and timely support of using units, and must concentrate on repair of these items which can be returned to service most expeditiously.

b. General Support Maintenance for Divisional Units. There are no GS maintenance units organic to the division. General support maintenance service and overflow DS maintenance service for the combat divisions and nondivisional DS maintenance units is provided by the GS maintenance battalions (TOE 29–136) assigned to the army and corps support groups and are tailored to provide support depending on the type of units and equipment found in the respective areas.

c. GS Light Equipment Maintenance Company. The GS light equipment maintenance company (TOE 29–134) provides general support maintenance for chemical light end items (except vehicle mounted) and components. Items repaired by this unit are normally considered as supply items and returned to army and corps stocks. The company operates on an area or unit basis and is usually assigned in general support of all light equipment located within a portion of the support group's area of responsibility.

d. Heavy Equipment Maintenance Company.

(1) The heavy equipment maintenance company (TOE 29–137) provides GS maintenance and overflow DS maintenance for heavy equipment end items and components thereof, including repair of heavy chemical equipment. This support is provided to divisional and nondivisional DS maintenance units. In addition, the company supports supply units for the purpose of testing, repairing and classifying instock end items and components, and assists supported units, as necessary, in the evacuation of materiel.

(2) Heavy equipment maintenance companies receive work from both divisional and nondivisional DS maintenance units, from collection points, and from supply units. Workload may be received directly from units or through a collecting point as directed by the materiel management section of the corps or army supply brigades.

Section V. CHEMICAL EQUIPMENT REPAIRMEN

45. Requirements

a. To determine requirements for chemical equipment repairmen requires development of several basic factors (AR 310–32):

(1) The number of chemical equipment end items (density) to be supported.
(2) The annual maintenance man-hour requirements per end item.
(3) The indirect labor factor is computed to be 40 percent of the annual maintenance man-hours required to support the item.
(4) The annual maintenance man-hour availability factor.

b. With the basic information indicated above, an arithmetic procedure can be used as follows:

(1) Density of each item × annual maintenance man-hour requirement = total annual maintenance man-hour requirements.
(2) Annual maintenance man-hour requirements × indirect labor factor = indirect labor requirement.
(3) Annual maintenance man-hour requirements + indirect labor requirements ÷ the annual maintenance man-hour availability factor = maintenance manpower requirements.

c. Based on the foregoing arithmetic procedure, requirements for chemical equipment repairmen to support the chemical equipment in TOE of units in a type force can be computed.

46. Distribution

Chemical equipment repairmen must be located in reasonable proximity to the items of equipment to be maintained. This is difficult to achieve since the multifunctional maintenance units contain a fixed mix of equipment repairmen but are required to support groups of other TOE units which are not necessarily in a fixed configuration. Recognizing this fact, the number of chemical equipment repairmen required to support the force should be distributed among appropriate maintenance units in the forces in a manner which will have the least impact on existing TOE.

CHAPTER 5

AMMUNITION SERVICE

Section I. INTRODUCTION

47. General

a. Chemical and biological (CB) munitions have tactical and strategic application in offensive and defensive military operations. They may be used alone, or in conjunction with other types of ammunition to increase the effectiveness and flexibility of the entire spectrum of firepower available to the commander. Since the physiological effects of chemical and biological agents may range from temporary incapacitation through lethality, the commander is provided a degree of flexibility in applying available combat power.

b. Chemical and biological munitions services have been functionalized with those of other ammunition services, thus enhancing customer "one stop" ammunition service. Chemical personnel have been incorporated into ammunition units based on the functionalization of technical services.

c. Functionalization of ammunition services now includes—

(1) Receipt, storage, issue, and the provision of services allied with CB munitions. Allied services include: mixing of flame thrower and fire bomb fuels; filling chemical land mines, flamethrowers, flame field expedients and fire bombs with thickened fuel (gasoline and thickener); filling munitions and/or dispersers such as airplane spray tanks and land mines with lethal agents, riot control agents, smoke agents, incapacitating agents, and incendiaries; transferring agents; surveillance, maintenance modifications, renovation and reconditioning of CB munitions (including bulk agents) as required.

(2) Inspection, evacuation, escort, demilitarization, destruction, deactivation, safety and security services of CB munitions and related items.

(3) Providing CB munitions services to Navy, Air Force, Marines, and Allied Forces as required.

Section II. THEATER ARMY SUPPORT COMMAND

48. Communications Zone

a. General.

(1) Ammunition service embraces the direct and general supply of all types of conventional ammunition, special ammunition and special ammunition repair parts less common items; in-storage maintenance of conventional ammunition; general maintenance support of missiles, rockets and associated control and launching equipment, special tools and peculiar test and handling equipment used in support of these mission items; and special ammunition materiel and test handling equipment.

(2) Ammunition is defined as a contrivance charged with explosives, propellants, pyrotechnics, initiating composition or nuclear, biological or chemical materiel for use in connection with defense or offense, including demolition. Certain ammunition can be used for training, ceremonial or

nonoperational purposes. Generally, conventional ammunition is a grouping of all ammunition items which require stringent control, handling, and security and cannot be transported or stored in the same manner as general supplies (e.g., small arms, pyrotechnics, riot control agents, high explosives). Special ammunition, requires the highest degree of control, handling and security. Included are such items as nuclear warheads, atomic demolition munitions, certain toxic chemical and biological munitions, selected ammunition, and missile body assemblies.

b. Ammunition Service in the Communications Zone. Ammunition service in the communications zone is based upon ammunition depot complexes. The depot complexes are located in both the forward and rear areas of COMMZ; normally, one forward and one rear ammunition depot complex per corps slice within COMMZ.

(1) *Forward ammunition depot complexes.* Forward ammunition depot complexes will consist of a conventional ammunition depot, a special ammunition depot, and a general support guided missile maintenance facility. These forward depots will store combat essential ammunition reserve stocks. They provide further dispersal of stocks, and a source of ammunition for the combat zone and to the rear boundary. They are not considered static locations as is the case of the rear ammunition depot complexes since they must be continuously positioned adjacent to the combat forces they support.

(2) *Rear ammunition depot complexes.* Rear ammunition depot complexes will also consist of conventional ammunition depots, special ammunition depots and a general support guided missile maintenance facility. However, it is expected that the preponderance of ammunition will be received, stored, and shipped from these rear ammunition depot complexes direct to the direct and general support levels in the combat zone. The rear ammunition depot complexes will be located along the main routes in the vicinity of the ports. They are considered more or less permanent installations requiring permanent or semipermanent storage facilities for the protection of the ammunition reserve stocks under various weather conditions.

c. Requirements. The requirements for special ammunition are a matter of command decision and are covered in appropriate classified publications.

d. Stockage Levels. It is expected that the theater will be based upon a 45-day level of ammunition, 10 days of which will be maintained in the combat zone and the remaining 35 days in COMMZ. Within the communications zone 10 days will be positioned at the forward ammunition depots and 25 days at the rear ammunition depots.

e. Shipment of Ammunition.

(1) *Unitized loads.* It is expected that all conventional ammunition will be assembled in palletized, unitized (skid-mounted unit) or containerized loads at the manufacturer for distribution down to and including the direct support level in the field army. These loads of ammunition will be assembled consistent with the explosive compatibility requirements of applicable Army explosive safety regulations.

(2) *Throughput of ammunition.* The flow of conventional and special ammunition is shown in figures 4 and 5 respectively. The movement of special ammunition will be geared more closely to command decision and throughput of special ammunition will be governed by the desires of the commander to whom these items have been allocated. The average or equal distribution of conventional ammunition to each corps slice of the combat zone is shown in figure 4; however, this is subject to change with each mission assigned the different corps and expenditure restrictions imposed

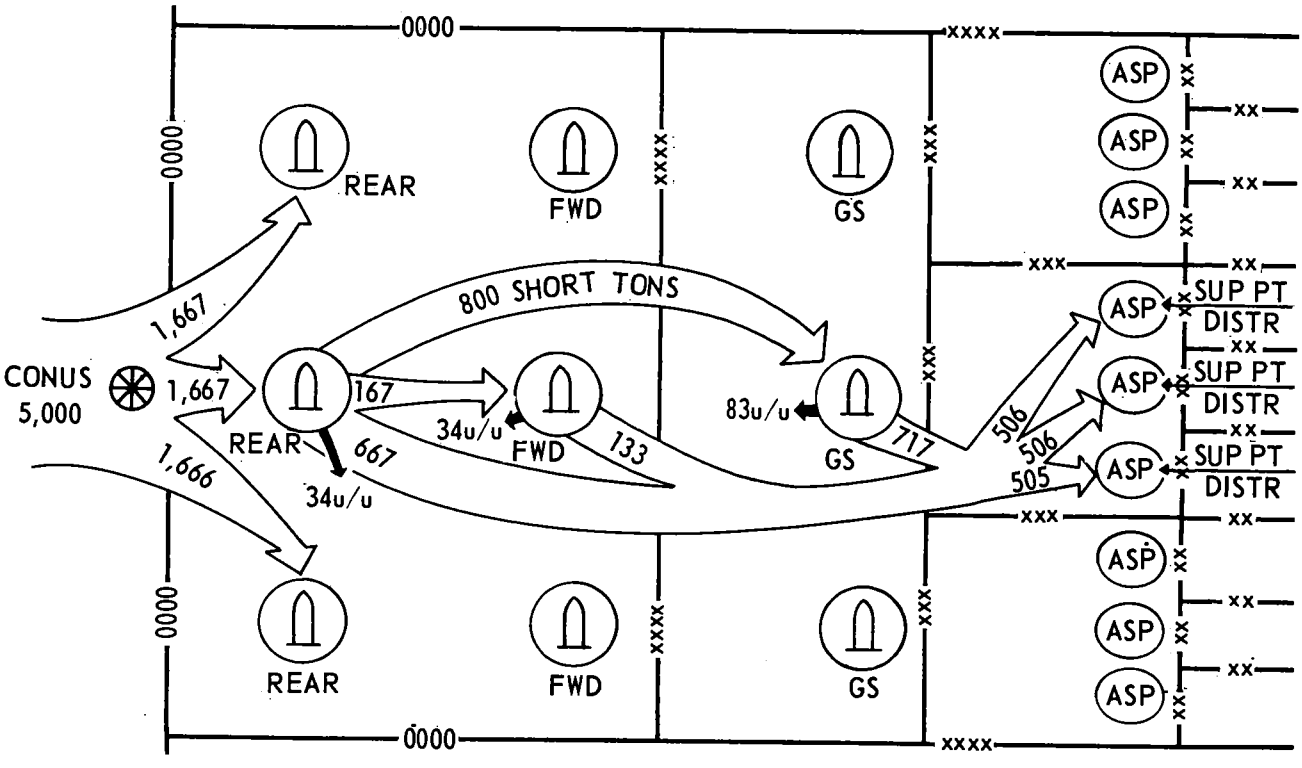

Figure 4. Flow of conventional ammunition (Corps slice of the theater in short tons per day).

by the tactical commanders. Normally the field army commander allocates ammunition to each of his subordinate corps based upon the main and secondary tactical efforts. Therefore, throughput of ammunition will require close coordination between the inventory control center (ICC) and the movements control center (MCC) at FASCOM, and the stock control (SCC) and MCC of the corps support brigades to insure that ammunition is routed or rerouted to meet tactical changes. In addition, coordination will be necessary between the FASCOM corps support brigade, and the ammunition group to shift ammunition operating units between corps slices to meet the varying lift requirements.

f. Tactical Control of Ammunition.

(1) *Conventional ammunition.* The theater army commander allocates conventional ammunition to the field army and informs the Supply and Maintenance Command ICC through TASCOM.

(2) *Special ammunition.* The "ownership" or allocation characteristic of special ammunition is different from conventional ammunition. The allocation of special ammunition is from Theater Army, to Field Army, to Corps, to Division. The commander of a logistical headquarters (e.g., TASCOM, Supply and Maintenance Command, Ammunition Group) cannot effectively influence the control, supply or resupply of special ammunition, but can only provide the means to carry out the desires of the tactical commander. A special ammunition logistical element (SALE) is formed from the resources available to the

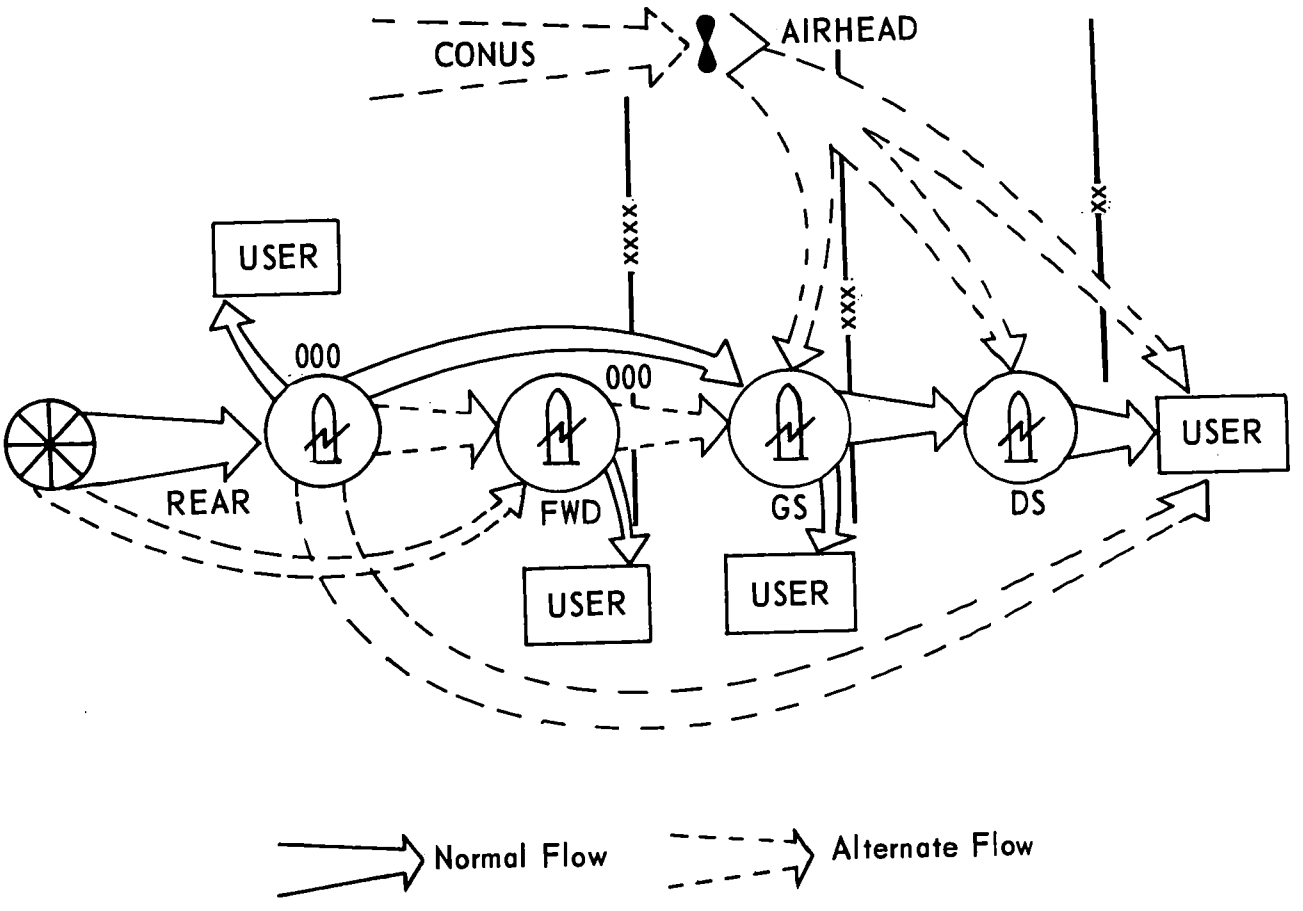

Figure 5. Flow of special ammunition, guided missiles, and special ammunition repair parts.

logistical commanders to expedite supply of special ammunition in the theater army for the air defense headquarters. In general terms, the mission of the SALE is to be immediately responsive to the air defense brigade commander in expediting the supply of special ammunition in the communications zone.

g. Inventory Control. Inventory control of conventional and special ammunition is exercised by the Missile and Munitions Branch of the Supply and Maintenance Command ICC. The chief of the Missile and Munitions Branch is the class V commodity manager. An account of the credits of both conventional and special ammunition allocated the field army is maintained by the ICC. The FASCOM ICC controls the calling forward of ammunition credits for the field army. The Supply and Maintenance Command ICC maintains the data link with the CONUS ammunition commodity manager. Internal COMMZ ammunition data downward flow is from the ICC to the ammunition group, to the ammunition battalions (operating depot complex). The upward flow is from the ammunition battalion direct to the ICC. The ammunition depots will have the necessary transceivers and ADP equipment to receive and transmit data through the system.

h. Munitions Safety Control. Munitions safety control personnel are included within the organization of the operating companies that will be required to store and issue chemical and biological munition. These personnel will perform a dual function, that of internal

storage monitoring and decontamination, and technical escort services for stock in transit. If and when deemed necessary explosive ordnance disposal personnel will be alerted during large shipments of chemical and biological munitions.

i. Maintenance of Ammunition.

(1) *Conventional ammunition.* The capability to perform routine maintenance and minor reconditioning of conventional ammunition falls within the capabilities of conventional ammunition units.

(2) *Special ammunition (less II and IV missile system maintenance).* Special ammunition depots in COMMZ will repair and return to service nuclear warheads, atomic demolition munitions (ADM), C-B warheads, and other special items evacuated to them from the combat zone. In addition, they will provide direct support maintenance to missile firing units and engineer units located in the communications zone. Since complete round evacuation is through the class V channel, the special ammunition depot will coordinate the repair requirement for II and IV missile system components with the missile maintenance facility.

(3) *Class II and IV components of missile systems.* The guided missile maintenance facility, located at ammunition depot complexes in COMMZ, will repair and return to service class II and IV missile systems components evacuated from the field army and/or received from the special ammunition depots. They obtain class II and IV missile system repair parts through the theater class II and IV repair parts channels. They also render technical assistance to the special ammunition depots.

49. Ammunition Units

a. Headquarters and Headquarters Company, Ammunition Group, TOE 9–22. The group headquarters provides command and administrative, tactical and technical supervision of four to six ammunition battalions DS/GS providing ammunition service to a field army slice of the communications zone. It supervises supply and maintenance of class V stocks located in the COMMZ and classes II and IV items peculiar to class V explosive components and warheads. It directs rear area security and area damage control activities within the ammunition group consistent with the policies of the Supply and Maintenance Command and the Area Support Command. It is assigned to the Supply and Maintenance Command, TASCOM on the basis of one per Supply and Maintenance Command and has the following capabilities:

(1) Commands four to six ammunition battalions.

(2) Supervises the supply and maintenance of class V stocks in the communications zone and of class II and IV items peculiar to class V explosive components and warheads.

In support of an eight-division force this will consist of two ammunition battalions with three operating companies each, and two ammunition battalions with six operating companies each. For a twelve-division field army, one each of the two differently organized ammunition battalions would be added.

b. Headquarters and Headquarters Company, Ammunition Battalion DS/GS, TOE 9–36.

(1) Provides command and administrative, tactical and technical supervision over an ammunition depot complex consisting of conventional and special ammunition, and guided missile maintenance companies.

(2) Furnishes ammunition service data for about 400 DOD line items to the Supply and Maintenance Command for accomplishment of inventory and stock control.

(3) Commands three to six ammunition operating companies.

(4) Furnishes technical assistance to supported firing units.

c. Ammunition Company, DS/GS, TOE 9–

38. This unit establishes and operates a conventional ammunition depot for the receipt, storage, and issue of shipment of all items of conventional ammunition to include bulk toxics and certain high density, low maintenance missiles. Performs routine maintenance and minor reconditioning of conventional ammunition items, components, and containers. Performs munitions safety control functions to include in-storage monitoring and technical escort. It is assigned to a Supply and Maintenance Command Ammunition Battalion DS/GS on the basis of one per forward ammunition complex or four per rear ammunition depot complex. It may operate a conventional ammunition depot alone (forward) or in conjunction with other ammunition companies DS/GS (rear).

d. Special Ammunition Company, GS, TOE 9–48. This unit provides complete round general supply support for missiles, large rockets, nuclear projectiles, atomic demolition munitions and C-B warheads to include replacement components and wholesale repair parts service peculiar to warheads and explosive components. It furnishes special ammunition and associated test and handling equipment direct support maintenance to users in COMMZ and general support maintenance backup support to the field Army. Furnishes, within unit capabilities, direct supply support to firing units located in COMMZ. It is assigned to a Supply and Maintenance Command Ammunition Battalion DS/GS on the basis of one per forward and rear ammunition depot complex. Operates special ammunition depots as a part of the ammunition depot complexes in the communications zone. Performs munitions safety control functions, both internal as well as technical escort services.

e. Military Police Physical Security Company. Military Police Physical Security Companies are attached to the Supply and Maintenance Command Ammunition Battalions DS/GS on the basis of one per Special Ammunition Company GS.

f. Guided Missile Maintenance Company, GS, TOE 9–59. This unit provides general support maintenance for all non-explosive components of supported missile systems to include missile system peculiar ground guidance, launching, test and handling equipment. It is assigned to Supply and Maintenance Command Ammunition Battalion DS/GS on the basis of one per forward and rear ammunition depot complex. It performs general support maintenance and repair (to piece part level if required) for assemblies, subassemblies, test equipment and ground support equipment in support of Lance, Shillelagh, TOW, Redeye, and Chapparral missile systems. Furnishes technical assistance to using units and the special ammunition company, GS as required.

Section III. FIELD ARMY SUPPORT COMMAND

50. General

Ammunition service to the field army is based on the corps slice. Ammunition operating units required in support of a corps slice are organized under the ammunition group attached to the corps support brigade. This has the advantage of requiring the least organizational change in support of an independent corps force and is easily expanded to support either an eight or twelve division force by attaching an ammunition group to each corps support brigade.

51. Ammunition Service at the Direct Support (DS) Level

Conventional and special ammunition are combined and supplied by type tactical units. For example, the special ammunition supply point (SASP) will stock all the ammunition (conventional and special) required to support missile firing units. On the other hand, all the conventional and special ammunition required by firing units other than missile firing units will be provided by the ammunition supply point (ASP). All of the special ammunition and about 200 short tons of conventional ammunition for each ASP will be stored on wheels.

These mobile stocks of conventional and special ammunition are referred to as the Mobile Ammunition Supply Point (MOBASP). They may be located near or forward of the ASP depending upon how fluid the combat situation becomes. The MOBASP is organic to the ammunition company (Ammunition Company, Conventional/Special, DS) that operates the ASP. There are two special ammunition supply companies (missiles) per corps slice, each of which is capable of establishing two SASP's for a total of four. In addition, there are three ammunition companies (conventional/special, DS) per corps slice, each of which is capable of establishing an ASP and a MOBASP for a total of three ASP's and three MOBASP's. Supply point distribution is the normal method of providing ammunition (conventional and special) to all firing units.

52. Ammunition Service at the General Support Level

All ammunition stored in rear of the DS level is positioned to provide dispersion of stocks, a source of supply in the event forward SASP's and ASP's are overrun, replenishment shipments to forward supply points when requirements cannot be met by COMMZ, and provide a source of ammunition to using units located in the rear areas. The positioning of these reserve stocks will vary from the rear area of the corps to the army service area dependent upon the tactical situation. Conventional and special ammunition stocks are stored and supplied separately at the GS level.

53. Stockage Levels

It is expected that the theater will be based upon a 45-day level of ammunition, of which 10 days will be authorized the combat zone. Within the combat zone 3 days are positioned at the direct support level and the remaining 7 days of supply will be at the GS level.

54. Shipment of Ammunition

The average daily throughput of conventional ammunition per corps slice is shown in figure 4. The distribution scheme as shown is subject to change with each mission assigned the corps by the field army commander. The field army commander allocates conventional ammunition to the corps, and the corps to division, based on main and secondary missions. Therefore the efficiency of throughput of conventional ammunition per corps slice will depend upon the ability of the movement's control centers (MCC) and inventory and stock control centers (ICC/SCC) to maintain in-transit control. For example conventional ammunition is supplied through a "push-type" supply system in order to assure that quantities by type filler are made available. Forward supply points are replenished daily. The order and ship time from COMMZ depots to the DS level is approximately three days. The sporadic consumption of conventional ammunition by type filler within caliber makes it difficult to estimate refill requirements for forward supply points 3 days in advance. It follows then that a system must be developed to satisfy the requirements of a "pushtype" supply system which would minimize cross leveling of stocks between corps. Since conventional ammunition is a tonnage supply problem, cross leveling of stocks can result in the "tie-up" of a considerable amount of lift capability and transportation that may be desperately needed elsewhere. The system which best handles the problem considers the throughput of all conventional ammunition for a corps slice to the general support level with authority to reroute up to 50 percent or 800 tons using COMMZ transportation to partially refill forward supply points. The criteria upon which the system is based includes 3 days of stocks at the DS level and 7 days at the GS level; both SCC's and ICC's will have daily due-in records automated; the MCC's will be able to identify shipments prior to arrival; order and shipping time from COMMZ depots is about 3 days.

55. Tactical Control of Ammunition

a. Conventional Ammunition. The theater army commander allocates ammunition to the field army at the time the mission is assigned. The field army commander establishes a supply rate to subordinate corps, and corps to divisions. Each tactical commander normally establishes supply rates of ammunition based upon the main and secondary tactical efforts. The ICC is provided control information by the FASCOM headquarters based upon the allocation information received from the field army.

The SCC receives similar information from the corps through the corps support brigade.

b. Special Ammunition. A special ammunition logistical element (SALE) is formed from the resources available to ICC/SCC to expedite supply and facilitate control of special ammunition (to include C-B warheads) at the army and corps tactical operations centers. In general terms, the mission of the SALE is to be immediately responsive to the army and corps commanders in expediting the supply of special ammunition from the tactical operations center direct to the storage location.

56. Inventory Control

a. Conventional Ammunition. Inventory control of conventional ammunition for the field army is exercised by the FASCOM ICC under the staff supervision of the supply staff. The corps support brigades ICC performs stock control of conventional ammunition for a corps slice of the combat zone. The missile and munitions branch of the FASCOM ICC maintains an account of credits for the field army, and the missile and munitions branch of the corps support brigade SCC's accounts for credits for a corps slice. The FASCOM ICC also controls the calling forward of credits of conventional ammunition from COMMZ based upon reports from the stock control centers.

b. Special Ammunition. The field army SALE keeps the FASCOM ICC apprised of the special ammunition situation from the tactical point of view, furnishing reports and other information deemed appropriate. The Chief of the Missile and Munitions Branch, FASCOM ICC, who is the ammunition commodity manager for the field army, accomplishes the interface with the Supply and Maintenance Command (SMC) ICC for special ammunition. As with conventional ammunition, the FASCOM ICC furnishes SMC ICC a status of special ammunition stocks to include release orders, and requests for disposition on special ammunition beyond the repair capability of the field army. In turn, SMC ICC provides the FASCOM ICC with notice of shipments, disposition instructions on unserviceable special ammunition and other information as appropriate.

57. Stock Control

a. Conventional Ammunition. Stock control of conventional ammunition is accomplished by the Missile and Munitions Division of the Corps Support Brigade SCC under the staff supervision of the Ammunition Services Element of the ACofS, Supply. The flow of ammunition data through ADP system is as stated above. The ammunition group and battalions will have the necessary ADP equipment to transmit and receive data through the ADP system.

b. Special Ammunition. The corps SALE keeps the corps support brigade SCC up to date on the special ammunition situation from the tactical point of view, furnishing reports and other information as deemed appropriate. In addition, the corps support brigade SCC keeps the FASCOM ICC up to date on special ammunition transactions for the particular corps slice. In turn, the FASCOM ICC relays to the corps support brigade SCC such information as notice of shipments from COMMZ and evacuation instructions for unserviceable special ammunition as overflow maintenance to COMMZ.

58. Munitions Safety Control

Munitions safety control personnel are included within the organization of the operating companies that store and issue chemical and biological munitions.

59. Maintenance of Ammunition

a. Conventional Ammunition. Conventional ammunition units will have the capability to perform in-storage maintenance of conventional ammunition in the combat zone. Maintenance performed in the combat zone will be limited to repairing containers, cleaning, spot painting, and restenciling.

b. Special Ammunition (less II and IV missile system components). At the direct support level in the field army, only minor maintenance will be performed on special ammunition. The direct support level will provide an evacuation channel to the general support level where extensive repair will be accomplished.

60. Explosive Ordnance Disposal Service

Explosive ordnance disposal service will be provided the combat zone by control and dis-

posal detachments. This service will be performed consistent with the policies and procedures of the ACofS, Security, Plans and Operations. EOD service is requested through Rear Area Security/Area Damage Control (RAS/ADC) channels. The RAS/ADC centers place requirements on the EOD control detachment, who in turn directs the appropriate disposal detachment to take necessary action. In the event it becomes necessary, priorities will be established in accordance with the policies of the ACofS, Security, Plans and Operations. An EOD staff branch is organized under the ACofS, Security, Plans and Operations.

61. Organizations and Capabilities

a. Ammunition Service, Corps Support Brigade. Ammunition service staff personnel are integrated into the corps support brigade headquarters as follows:

(1) *ACofS, Supply.* An ammunition services division is included in the organization of the ACofS, Supply, for each corps support brigade. It consists of ammunition service staff personnel qualified in the supply and maintenance of conventional ammunition and the supply and maintenance of special ammunition (less maintenance of class II and IV missile systems components).

(2) *ACofS, Maintenance.* Ammunition service staff personnel who are specialists in the field of missile systems maintenance are integrated into the appropriate subdivisions within the organization of the ACofS, Maintenance.

(3) *Stock control center (SCC).* The corps support brigade SCC has a Weapons and Munitions Division for the stock control of ammunition for a corps slice within the combat zone. The weapons and munitions branch is further divided into three sections: weapons, missiles and munitions. It consists of those ammunition service staff personnel required to operate full time from the primary SCC location and a minimum duplication of personnel to operate from the alternate SCC location.

b. Headquarters and Headquarters Company, Ammunition Group, Direct Support/General Support, TOE 9-22. This unit provides command and administrative, and tactical and technical supervision over a direct support and a general support ammunition battalion providing ammunition service to a corps slice of the field army. It supervises supply and maintenance of conventional ammunition, special ammunition (special ammunition repair parts), and the maintenance of missile systems. It provides command, less operational control, over the explosive ordnance disposal units in support of a corps slice of the combat zone. It directs rear area security and area damage control activities within the ammunition group as directed by the corps support brigade or area commander. It is assigned to a corps support brigade or corps support command for independent corps operations, on the basis of one per corps slice of a field army or one per corps support command.

c. Headquarters and Headquarters Company, Ammunition Battalion, DS, or GS, TOE 9-36. This unit provides command and administrative, and tactical and technical supervision over conventional ammunition, special ammunition, and guided missile maintenance companies and other attached units; provides input data through the ADP system on ammunition service support for use by the stock control center; and, receives and disseminates technical intelligence information and requirements to subordinate units. It is assigned to a corps support brigade or corps support command ammunition group (DS/GS) on the basis of two per corps slice of a field army or corps support command. It commands four to seven ammunition operating companies. The GS ammunition battalion normally consists of two DS/GS ammunition companies (conventional ammunition); one GS special ammunition company (less maintenance of missile II and IV components); one GS guided missile maintenance company; and a MP physical security company for each GS special ammunition company. The DS ammunition battalion consists of three ammunition companies (conventional/special), which supports nonmissile firing units and operates an ASP; and two special ammunition supply (missile), which supports missile firing units and operates two SASP's. It exercises staff super-

vision over guided missile and related supply and maintenance activities of attached units. It also furnishes technical assistance to supported units as required, and operates an input/output device to include allied equipment for the transmission and receipt of ammunition data through the ADP system.

d. Ammunition Company, Conventional/Special, DS, TOE 9–37. This unit provides direct support of conventional and special ammunition to nonmissile firing units in the forward corps area. This includes the supply and maintenance of conventional ammunition. It provides an evacuation channel to the special ammunition GS level for all unserviceable special ammunition, nuclear weapons test equipment, training items and related materiel. It is assigned to a corps support brigade or corps support command ammunition battalion, DS, on the basis of three per corps slice of the field army. The establishment of a mobile ammunition supply point (MOBASP) near or forward of the ASP. The MOBASP can mobilize 100 percent of the special ammunition stocks and about 200 short tons of conventional ammunition. The capability of the special ammunition sections and the security for classified storage areas and for the movement of classified materiel are discussed in applicable classified publications.

e. Special Ammunition Supply Company, Missile, TOE 9–47. This unit provides complete round special ammunition and conventional ammunition DS support to missile and large rocket firing units located in the combat zone. It is assigned to a corps support brigade or corps support command ammunition battalion, DS, on the basis of two per corps slice of the field army. It provides technical assistance to supported units through the medium of technical assistance teams; receives, stores, and issues mission items; and, provides security for the classified storage areas and for the movement of classified materiel for internal operations.

f. Ammunition Company, DS/GS, TOE 9–38. This unit establishes and operates storage area for receipt, storage and issue and/or shipment of all items of conventional ammunition to include bulk toxics and certain high density, low maintenance missiles in support of troop units within the field army. It is assigned to a corps support brigade ammunition battalion DS/GS, on the basis of two per corps slice of the field army. Maintains ammunition lot locator, surveillance and other records as may be necessary. It also performs limited maintenance (repairing containers, cleaning, spot painting, restenciling) of conventional ammunition.

g. Special Ammunition Company, GS, TOE 9–48. This unit provides complete round general supply support for missiles, large rockets, nuclear projectiles and atomic demolition munition to include replacement components and wholesale repair parts service (less missile peculiar electronic and mechanical assemblies and components). It provides, with unit capabilities, direct supply support to firing units in the army service area. It is assigned to a corps support brigade ammunition battalions, DS/GS, on the basis of one per corps slice of the field army.

h. Guided Missile Maintenance Company, GS, TOE 9–59. This company provides general support maintenance for all nonexplosive components of supported missile systems to include missile systems peculiar ground guidance, launching, test and handling equipment. It furnishes, within unit capabilities, direct supply and maintenance support to missile firing units in the army service area, and is assigned to a corps slice of the field army. It furnishes technical assistance to using units and special ammunition company, GS, as required.

i. Military Police Physical Security Company. Military police physical security companies are attached to the corps support brigades' ammunition battalions DS/GS on the basis of one per Special Ammunition Company, GS.

j. Explosive Ordnance Disposal Control Detachment, TOE 9–500. This detachment provides operational control, planning and administrative service related to mission operations of disposal detachments for a corps slice in the combat zone. It operates an EOD control center. It is assigned to corps support brigade on the basis of one per corps slice of the field army. EOD control detachments are attached to ammunition groups for command, administrative and tactical supervision. It conducts liaison with corps and FASCOM RAS/ADC centers.

k. Explosive Ordnance Disposal Detach-

ments, TOE 9–500. This detachment performs final reconnaissance, identification, make safe, recovers and performs field evaluation of U.S. and foreign unexploded ordnance, disposes of unexploded ordnance made hazardous by damage of deterioration and performs technical assistance. It is assigned to corps support brigade explosive ordnance disposal control detachments on the basis of five per corps slice of the field army or one per 30,000 troops, whichever is the larger authorization. It assists technical intelligence units in developing data on foreign munitions, and provides instruction and assistance to ammunition storage units in the preparation and conduct of emergency destruction plans. On a stand-by basis, this detachment supports munitions and logistic activities (e.g., shipment of nuclear weapons, chemical and biological munitions).

CHAPTER 6

TECHNICAL INTELLIGENCE

62. General

a. Chemical, biological, and radiological (CBR) technical intelligence is an integral part of the total military intelligence effort and is essential in military operations. The possibility and/or probability of the use of chemical, biological and/or nuclear weapons by an enemy, his level of training, the effectiveness of his offensive and defensive equipment, his potential for waging CBR operations, and his capability to defend against these weapons are important considerations at every level of military planning. The impact that employment of CBR operations will have on our forces, or on enemy forces, makes timely technical intelligence information essential. The initiation of the use of CBR weapons can change the entire course of a war. The CBR technical intelligence organizational requirements generally fall into two functional categories as follows:

(1) An organization for the collection effort.

(2) An organization for the evaluation and analysis effort.

b. The process of collecting technical intelligence is, for the most part, one of directing the collection plan through area surveillance of all available sources of information. On-the-spot priority evaluation and dissemination of significant information may be made in connection with the collection effort where the situation warrants, but detailed analysis will not normally be accomplished by collecting personnel. Prior to use of CBR weapons, priority will be given to identification of capabilities of enemy forces to employ these weapons; and the capability of enemy forces to defend against employment of these weapons by our own forces. Once these weapons have been employed, priority in the collection effort will shift to identification of agents employed, procedures and information on new weapons and agents.

c. The evaluation and analysis organizational element will, in coordination with the miltary intelligence battalion headquarters and the Army G–2, conduct technical intelligence planning; coordinate the collection information, equipment, materials, and weapons from all available sources; and act as the centralized control point for technical intelligence activities of the Army. The evaluation and analysis element conducts, by scientific application, analysis of all available input to arrive at a meaningful estimate of enemy capabilities and probable intended courses of action.

63. Concept of CBR Technical Intelligence Operations

a. The planning, directing, coordinating, and control of the technical intelligence system is vested in the headquarters, and evaluation and analysis element of the organization. Its operation is located in the Army service area under direct control of the Military Intelligence Battalion Commander. The ACofS G–2, field army, provides staff supervision of the technical intelligence effort.

b. The technical intelligence field teams direct, supervise, and coordinate the technical intelligence collection effort within the corps and division areas. The field teams carry out the collection plan. The sources of the collection effort potentially include every unit and every individual soldier of the Army.

c. The technical intelligence field teams must continually coordinate the collection effort with unit intelligence personnel at the small unit level through periodic visits, distribution of guidance, and emphasis on importance and timeliness of information and captured equip-

ment from all possible sources. Only through this continued effort and training at the unit level can maximum effectiveness of the collection effort be achieved. Through appropriate training and command emphasis, the souvenir collectors who withhold equipment of importance in the collection effort can be minimized.

d. The majority of materiel, equipment, and documents will be captured by frontline units. However, some may be captured in rear areas from airborne operations or carried by prisoners of war. Some items of equipment may be captured in raids or may become available through overrunning an area.

e. When a large number of like items of equipment or materiel are captured, the technical intelligence field teams will examine the materiel, and obtain all available information relative to lot numbers, date of manufacture, and any other name plate or stenciled information that may assist in providing information on the item. Sufficient items will be transmitted through technical intelligence channels to properly evaluate the item. The remainder of the items are then handled through salvage supply channels for whatever use will serve our effort. At this time, the technical intelligence organization relinquishes control, and the items are handled in accordance with the salvage operations and property disposal operations of the theater.

f. The technical intelligence personnel of the field collection teams will automatically coordinate operations with explosive ordnance disposal teams if dud rounds are suspected of containing chemical, biological, or nuclear filling.

g. CBR specialists will assist military intelligence in interrogations at all echelons in those instances where the person being interrogated appears to have knowledge of CBR organization, doctrine, equipment, stockpiles, or capability to conduct chemical or biological operations or to defend against these operations.

h. The CBR collection effort includes the collection of samples in the field and identification or transmittal to appropriate laboratories for evaluation and analysis. This aspect of the collection effort is unique in that enemy employment is not restricted to frontline elements. Employment of CBR weapons may occur anywhere in the theater. The target may be a rear area depot or a key port. For this phase of the collection effort, timeliness is of the utmost importance. The technical intelligence organization must be responsive to this problem of area surveillance.

i. The evaluation and analysis elements of the technical intelligence organization are involved in combining the pieces of the collection effort into a meaningful estimate. Usually, this capability for scientific analysis increases in the rear echelons of the organization. By contrast there is little need for collection teams in the TASCOM except for that phase of the collection efforts specified in *h* above. The laboratory support unit will be located in TASCOM.

64. Organizational Requirements for CBR Technical Intelligence

a. Since technical intelligence results from continuous area surveillance of all possible sources, the technical intelligence organizational requirements will not significantly change for situations involving only chemical or biological operations as compared to the use of the two concurrently or in combination with the employment of nuclear weapons. In the event of increased activity in one or more of the above operations, additions to the basic organization may be made through attachment of cellular teams from TOE 30–600 or TOE 3–500. TOE 30–600 includes a CBR collection team and a CBR evaluation team. Team KA, CBR Agent Sampling and Analysis, TOE 3–500, is appropriate to augment the basic organizational capability in the event of significantly increased chemical and/or biological employment by the enemy. Augmented capability can be provided as required by attachment of Team LA from TOE 3–500 to meet specific requirements.

b. The basic technical intelligence unit of the field army is the Technical Intelligence Company (TOE 30–34E), a functionalized unit consisting of a company headquarters, a support platoon, and an evaluation and analysis platoon. The support platoon provides photographic support, a translation capability and a shipping and receiving section. The evaluation and analysis platoon contains a platoon headquarters, a communications-electronics section, a weapons and munitions section, a miscellaneous sup-

ply and equipment section, a mobility section, and a medical section. Technical intelligence field teams are located in TOE 30–18, Military Intelligence Detachment. The technical intelligence company, under operational command of the military intelligence battalion is the element that prepares, coordinates, and directs the technical intelligence collection plan. The technical intelligence evaluation and analysis effort and the formulation of an intelligence estimate is almost entirely dependent upon the field teams located in the corps areas for feed-in information.

c. The functionalized technical intelligence company can perform its required CBR technical intelligence mission since qualified personnel by MOS specialty and mission equipment are included in the TOE.

(1) The weapons and munitions section of the company will analyze, identify, and evaluate chemical agents, including the agent fill of ordnance ammunition and missiles. It will also evaluate flamethrowers, flame fuels, and smoke dispensing equipment and agents. The M19 sampling and analyzing kit is used in coordination with ordnance weapons analysts and EOD teams to identify the chemical agent fill of enemy munitions, or to prepare CBR samples of the fill for analysis by appropriate laboratory facilities. The personnel of this section will interpret the results of tests on the M19 kit and radiac instrument readings in addition to evaluating unknown agents and CBR weapons.

(2) The bulk of work in the CBR area of interest will normally be accomplished in this section. It includes the evaluation of all chemical and biological protective equipment and devices, both individual and collective; decontaminants and decontamination equipment; laboratory capability; and detection and identification kits. It further includes the evaluation of doctrine, concepts of use, and organizational implications related to the above equipment.

d. The technical intelligence field teams are planned as functionalized composite teams with representation of MOS skills required by all technical services. The areas of interest divide into two types of function—

(1) Implementation of the collection plan as pertains to materiel, equipment, documents, and information in the corps area and on-the-spot analysis of significant developments with appropriate dissemination of information.

(2) Collecting samples of chemical, biological, or radiological contamination, and rapid transmittal of samples to appropriate laboratories, identifying chemical agents and measuring radiological contamination.

e. The prompt identification of enemy CBR agents in the field is of the utmost urgency. The M19 sampling and analyzing kit, supported by laboratory facilities, offers the best available means at this time for accomplishing this. The M19 sampling and analyzing kit is included in the corps technical intelligence field teams (TOE 30–18) on the basis of one per team. Because of the large area of the corps, the urgency for timely reporting of this type information, and the number of anticipated CBR incidents in an operation involving these types of weapons, an addition of a Team KA, TOE 3–500, CBR Agent Sampling and Analysis, may be required on the basis of one team per corps to augment the corps technical intelligence field team collection effort. The KA team is also required in the TASCOM on the basis of one team per area support group. The KA team may be attached to a division when it is operating as a separate force.

f. Evaluation and analysis of technical intelligence pertaining to the CBR capability of enemy forces is satisfied by a CBR Technical Intelligence Evaluation Team LL, organized under TOE 30–600 and supported by a General Chemical Laboratory (TOE 3–97). The most complete field evaluation and analysis capability is found at theater level. The general chemical laboratory has functions, other than supporting the technical intelligence effort, which are explained in chapter 7; however, the support of technical intelligence is one of its prime missions.

g. No organic CBR technical intelligence collection capability is required in the COMMZ except that of identifying agents and collecting samples and transmitting them to the supporting chemical laboratory for analysis. This capability is required in the TASCOM as specified in *e* above. Team KA, CBR Agent Sampling and Analysis, a two-man team with the M19 CBR agent sampling analyzing kit and appropriate radiac instruments, can accomplish this mission in CBR operations. This team, as well as Team LA, CBR Reconnaissance, mentioned in *a* above, has been included in TOE 3–500G.

CHAPTER 7

MISCELLANEOUS CBR SERVICES

Section I. GENERAL

65. Introduction

a. Staff personnel at all echelons from theater Army through division must be prepared to coordinate CBR services in the field as part of the total service effort.

b. CBR services in a theater of operations must be considered for combat, combat support, and combat service support units to accomplish their mission in CBR operations.

66. Staff Responsibility

Usually the staff chemical officer, when authorized, at the various levels provides assistance in these areas of support and advises the commander on such matters. However, all staff and unit officers where these services are located in multifunctional units require a knowledge of units capable of performing the required CBR services.

67. Services

This chapter deals with the following specialized services:

a. Decontamination.

b. Clothing impregnation, (Reimpregnation).

c. Laboratory services.

d. Chemical, biological, and radiological elements (CBRE).

Section II. DECONTAMINATION

68. General

Decontamination is the process of reducing the hazard caused by chemical, biological, or radiological contamination sufficiently to allow the mission to be accomplished. The hazard may be reduced by making harmless, removing, destroying, or covering the contamination. The objective is to reduce the contamination with the least expenditure of labor and materiels and within such time as the situation allows, on a priority established by the commander.

69. Categories of Decontamination

Three broad categories of decontamination support involving the establishment of field decontamination stations are found in various TOE, see appendix B.

a. Category I. The assignment of a truck-mounted, power-driven decontaminating apparatus (PDDA) to a unit *without* specifically assigned operating personnel. These PDDA are listed in the TOE for the unit, but must divert personnel from their normal mission to that of an *additional duty* operation of the PDDA.

b. Category II. The assignment of completely organized decontamination sections or platoons with appropriate numbers of personnel and equipment (PDDA) as small elements within functionalized maintenance and support type units. These elements are now included in current TOE. They are immediately available for second echelon decontamination of their own units and could be made available for third echelon decontamination of their supported units, provided they could be spared from their own requirements during CBR attacks.

c. Category III. The use of decontamination teams (TOE 3–500) to support the third echelon

decontamination requirements of COMMZ or the Field Army. The teams should be used in their entirety in cases where an actual attack may overwhelm the decontamination capabilities of units.

70. Concepts of Decontamination

Using the three categories of decontamination, broad concepts can be recognized.

a. Independent Concept. Each unit is self-sufficient, although use could be made of category I decontamination described above.

b. Functionalized Concept. A number of decontamination sections with specifically assigned operating personnel are located in headquarters companies, forward support companies, and maintenance units of division support command and of direct support and general support organizations throughout the field army and COMMZ. Sufficient functionalized elements may be furnished on a supporting basis to take care of any third echelon decontamination required by any supported unit. The functionalized concept makes use of the second category of decontamination described in paragraph 60.

c. Specialized Unit Concept. In this concept all the third echelon requirements of all units in the theater may be satisfied by a certain number of decontamination teams, FA or FB, from TOE 3–500. The teams could be attached to major units and tailored to support the specific task organization or independent operations. Category III decontamination is used in this concept.

d. Reinforced Concept. In this concept the functionalized capability described above would be reinforced by appropriate numbers of specific decontamination teams of TOE 3–500. This utilizes all three categories of decontamination and represents a balance between forward elements requirements for immediate decontamination facilities and emergency requirements which might arise suddenly and unexpectedly anywhere on the battlefield.

71. Recovery, Evacuation, and Disposal of CBR Contaminated Equipment and Materiel

a. The procedures for recovery and evacuation of equipment and materiel that is contaminated by CBR agents is the same as for uncontaminated materiel, see FM 29–20, and FM 29–22; for ammunition, see FM 9–6.

b. Before an attempt is made to recover or evacuate contaminated materiel, a check will be made to determine the practicability of such action. All units are provided detection kits for chemical agents and radiac instruments for measuring the intensity of radiation. If practicable, decontamination will be accomplished (TM 3–220) by the using unit and the disabled or abandoned equipment will be evacuated by the appropriate maintenance support unit in FASCOM/TASCOM. If the contamination is such that it exceeds the capabilities of any unit to decontaminate the materiel to prevent recovery and evacuation, the location will be noted and the next highest headquarters will be notified so that advice and assistance on decontamination or disposal may be obtained. Instructions pertaining to the recovery, evacuation and disposal of contaminated materiel will be published in SOP's.

Section III. CLOTHING IMPREGNATION (REIMPREGNATION)

72. Organization and Mission

The organizations with a mission of impregnation and reimpregnation of clothing used for protection against toxic chemical agents, are TOE designated Supply and Service units (app B). Storage and issue of impregnated (reimpregnated) protective clothing is handled by *Supply and Service Units.* The supply and service units listed are located both in FASCOM and TASCOM Areas.

73. Impregnation in the Field Army Area

Combat units in the field army area are provided the field clothing impregnating set with which to accomplish emergency field impregnation of clothing.

74. Policy

The protective clothing policy details for combat areas are outlined in AR 700–62.

Section IV. LABORATORY SERVICES

75. Organization and Mission

The General Chemical Laboratory (TOE 3–97) has a primary mission to provide laboratory services for the analysis and identification of suspected or unknown CBR agents (except identification of biological agents, which is a medical responsibility) for a theater of operations. It can also develop temporary devices and measures (field expedients) for CBR activities. A chemical laboratory has a secondary mission to analyze, within capabilities, chemical and other items procured in the theater to assure that the contract specifications are satisfied.

76. Assignment

The General Chemical Laboratory is normally assigned to the Theater Army and under the operational command of TASCOM. It may be assigned to Corps Support Command (COSCOM) of an independent corps force. The laboratory may be further attached to a field depot under the Supply and Maintenance Command.

77. Capabilities

a. The General Chemical Laboratory is capable of—

(1) Performing chemical and physical analyses pertinent to the performance of its mission.

(2) Conducting, within personnel and equipment limitations, studies, experiments, and research on subjects other than those on CBR materiel, as authorized and directed by the theater commander.

b. The Laboratory supplements the intelligence capabilities of intelligence units and may further exploit the findings of these units.

c. This unit is dependent upon other units for an adequate supply of purified water, explosive ordnance disposal services (shell tapping and demilitarizing), mess, motor maintenance, supplemental transportation, and religious support.

d. Individuals of this unit can engage in effective, coordinated defense of the unit's area or installation; however, it depends on other organizations for assistance in local security of installations against hostile ground attack.

78. Coordination With Other Activities

a. Since the identification of biological agents is the responsibility of the Medical Service, the Laboratory coordinates its biological materiel activities with medical laboratories and other appropriate Medical Service units.

b. Coordination is maintained by the laboratory by—

(1) Intelligence units on projects related to enemy CBR materiel.

(2) Depots and supply, maintenance, and salvage collection points on projects related to the laboratory determination of the serviceability of CBR items.

(3) Explosive ordnance disposal units on projects related to the sampling and testing of the agent filling of unexploded foreign chemical-biological ammunition.

(4) Ammunition service units on projects related to sampling of the chemical agent filling of chemical ammunition.

79. Functions

a. The laboratory provides services not only to theater army forces but also to such theater Navy, Air Force, allied, and other forces as may be directed by the Theater Army Commander.

b. Some of the laboratory services are of special interest to military intelligence. For example, the laboratory processing of enemy materiel may furnish information of technical, tactical, and strategic intelligence value to all echelons of command.

c. Under conditions of CBR operations, the laboratory services are devoted primarily to projects related to CBR activities.

d. Under conditions of non-CBR operations, the services may be devoted secondarily to projects related to other than CBR activities.

e. Typical laboratory services are listed below—

(1) Analysis and identification of enemy chemical and radiological agents.
(2) Development of expedients for the emergency protection of troops and equipment against new enemy CBR agents.
(3) Surveillance testing and analysis of materiel to determine serviceability.
(4) Solving problems of a chemical nature that are submitted by higher headquarters and that are consistent with the equipment available.
(5) Performing tests related to research and development work particularly applicable to the theater.
(6) Providing technical advice and assistance to other units as required.
(7) Examining and testing water and foods for toxic contamination.
(8) Analysis and testing of filter elements of protective masks, filters of gas-particulate units, protective clothing, clothing impregnation materials, decontaminants, chemicals, defoliants, insecticides, dyes, paints, solvents, battery acids, motor coolants, concrete, and soil.

Section V. CHEMICAL, BIOLOGICAL, AND RADIOLOGICAL ELEMENT (CBRE)

80. General

The chemical, biological, and radiological element (CBRE) is an element of a tactical operations center (TOC) established at division, corps, army, or independent corps level. It is also an element of a rear area operations center, such as an area damage control center or a rear area operation center (RAOC) with an area damage control mission, established at field army support command (FASCOM) and logistical command levels (TASCOM).

81. Scope of Activities

a. The activities of a CBRE in a tactical operations center encompass the friendly employment of chemical and biological agents and fallout from friendly nuclear bursts, and the defense against enemy employment of chemical and biological agents and fallout from enemy nuclear bursts.

b. The activities of a rear area operations center (RAOC), such as an area damage control center or a rear area security control center with an area damage control mission, encompass defense measures against enemy employment of chemical and biological agents and fallout from enemy nuclear bursts on an area basis and require an internal CBRE capability to perform the functions of a contact point within the NBC reporting system and organization. These centers must receive, evaluate, report, and disseminate information pertaining to enemy nuclear detonations and chemical and biological attacks, resultant contamination, and the preparation and dissemination of appropriate warnings to friendly forces and installations.

82. Functions

A CBRE of an operations center at a major command performs the following functions:

a. Coordinates CBR operations with other combat support and combat service support operations.

b. Performs chemical and biological target analysis and munition requirement computations.

c. Receives, collates, evaluates, and disseminates NBC (nuclear, biological, and chemical) reports in consonance with STANAG 2103.

d. Prepares and disseminates effective wind messages.

e. Receives NBC strike reports and performs assessment of effects for all enemy and friendly strikes, as required.

f. Coordinates chemical detection and radiological surveys with higher, lower, and adjacent units, and controls radiological surveys as required.

g. Plans and coordinates the collection of CBR contamination information.

h. Collates, evaluates, and disseminates CBR contamination data.

i. Provides advice on the impact of CBR contamination on tactical and logistical operations.

j. Maintains the CBR situation map.

k. Maintains the radiation dose status chart of subordinate and attached units.

l. Provides advice on CBR intelligence matters and coordinates with the intelligence element of the headquarters concerned on all matters related to CBR intelligence.

m. Provides advice and recommendations pertaining to the use of defoliants and herbicides in support of tactical operations.

n. Provides advice on smoke operations.

o. Provides data on the casualty-producing effectiveness of and degree of hazard from chemical and biological attacks.

83. Organization

The personnel requirements for a CBRE at the various command levels are based on the minimum requirements that will provide the commander with an acceptable CBR operational readiness posture. Personnel for operating a CBRE at division level are provided by the division chemical staff section, augmented as required by personnel from an attached TOE 3–500 team JA, CBR element. CBRE personnel at corps, army, and independent corps level and TASCOM are provided from designated staff section(s) and are augmented as required by attachment of TOE 3–500 JA teams.

84. Operations

Procedures for operation of the CBRE are set forth in the SOP of the operations center, of which the CBRE is an element. For further details, see FM 101–5, FM 21–40, and FM 3–12.

CHAPTER 8

REAR AREA PROTECTION

85. General

a. The purpose of rear area protection (RAP) is to prevent interruptions by the enemy of combat, combat support, and combat service support operations. The major causes of this interruption are: nuclear, chemical and biological attacks, airborne troops, guerrillas, infiltrators, and saboteur operations.

b. Rear area protection measures include actions to prevent, neutralize or destroy enemy attacks on units, activities, and installations in rear areas.

c. Rear area protection includes those measures taken prior to, during, and after attack by nuclear, chemical, biological weapons (including radioactive fallout), major accidents, or natural disaster, to avoid or minimize the effects thereof.

86. Definitions

a. Rear Area Operations Center (RAOC). A group of personnel trained and equipped to keep the area commander informed of the current situation and resources available to cope with emergencies in his area. The RAOC may provide command and control over forces committed to handle the RAP missions.

b. Rear Area Protection (RAP). This is a more precise name for what is currently called rear area security and area damage control. Rear area security/area damage control indicates a distinct set of highly objective, physical acts that will bring about security in the rear while rear area protection is a broader term that includes subjective political considerations which must also be injected into this total field. The term rear area protection is used in lieu of rear area security/area damage control throughout this chapter.

c. Real Time Situation. The situation that exists at the moment.

d. Rear Area Protection Potential. When applied to a unit, rear area protection potential identifies that portion of combat support or service support units designed and earmarked to perform a rear area protection mission. RAP potential includes both rear area security and area damage control resources.

87. CBR Functions and Responsibilities

a. The CBR responsibilities in rear area protection pertain largely to measures for avoiding or minimizing the effects of enemy chemical, biological, and nuclear attack. These responsibilities are centered in either the Rear Area Operations Center (RAOC) or the Area Damage Control Center (ADCOC) of headquarters having major rear area protection responsibilities.

b. CBR operations performed in the RAOC/ADCOC include—

(1) Assisting in the preparation of plans to prevent enemy interference by surface or airborne forces with support operations and to destroy the hostile forces involved.

(2) Assisting in the preparation of plans to minimize the damage effects of enemy mass destruction weapon attacks, major accidents, and natural disasters.

(3) Preparing vulnerability analyses of units and installations within their area of responsibility in accordance with available intelligence.

(4) Receiving, collating, evaluating, and disseminating NBC (nuclear, biological, and chemical) reports as specified

in STANAG 2103 and discussed in detail in FM 21–40 and FM 3–12.

(5) Preparing and disseminating predictions of fallout from enemy delivered nuclear weapons.

(6) Providing data on the casualty-producing effectiveness of and degree of hazard from enemy chemical and biological attacks.

(7) Planning, controlling, and coordinating chemical and biological detection and radiological monitoring and survey operations, and decontamination operations of decontamination elements.

(8) Plotting and displaying forecasts and/or information on areas of chemical and biological contamination and the areas of effects of nuclear detonations to include radiological fallout.

(9) Assisting in planning, controlling, and coordinating damage control teams.

(10) Providing advice on CBR matters to the commander and staff.

c. Unit commanders are responsible for organizing, training, and equipping their unit to insure the accomplishment of their mission in a CBR environment. To assist unit commanders in executing these responsibilities, AR 220–58 provides for the appointment within all company-size units of a qualified CBR officer, noncommissioned officer, and enlisted alternate on an additional duty basis. Detailed duties of CBR officers and NCO's are outlined in FM 21–40.

d. In view of the anticipated operational employment of rear area protection (RAP) forces, each officer and NCO in a RAP task force must be proficient in CBR tactics, techniques, protective measures, detection, decontamination and CBR defense procedures. Their knowledge of and ability to use riot control agents, chemical agent detection equipment, and radiac equipment are of particular importance in RAP operations.

e. FM 21–40 provides for company-size units to organize and train CBR teams composed of unit personnel. These teams include chemical agent detection and radiological monitoring teams, decontamination teams, and control parties. To preclude degrading unit capabilities, appropriate special equipment for these teams is authorized by TA 50–914, Individual Safety and Protective Clothing and Equipment. These trained CBR teams located in an area commander's area of responsibility are a source of CBR support for use in RAP operations. However, unit commanders must insure that their unit has sufficient CBR trained personnel to permit the unit to continue its primary mission in a CBR environment during the absence of the unit's CBR teams.

88. Responsibilities for Rear Area Protection

Rear area protection (RAP) is the responsibility of the FASCOM commander for the army service area and the area support commander for the COMMZ. Responsible headquarters maintain close monitorship of RAP operations to assure an orderly, effective and timely escalation from the use of organic combat service support to combat troops as the primary reaction force to counter enemy guerrilla activities.

89. Organization for Rear Area Protection in FASCOM

a. In the field army service area, FASCOM is responsible for rear area protection.

b. The Assistant Chief of Staff of Security, Plans, and Operations (TOE 54–12T) is responsible for the preparation and execution of RAP operations. FM 54–3, The Field Army Support Command, discusses the organization, operations and functions of this office.

c. The FASCOM commander further assigns this mission to the Army support brigade commander (TOE 54–22T). The operation of the area damage control operations center (ADCOC) is contained in FM 54–4.

d. Headquarters Support Group (TOE 29–102) is primarily engaged in supervising the accomplishment of assigned missions and tasks by its subordinate units. The attached rear area operations center (RAOC) TOE 29–408, directs the development of local security plans and coordinates these with the RAP plans of adjacent tactical headquarters. The organization of the RAOC is discussed in paragraph 91.

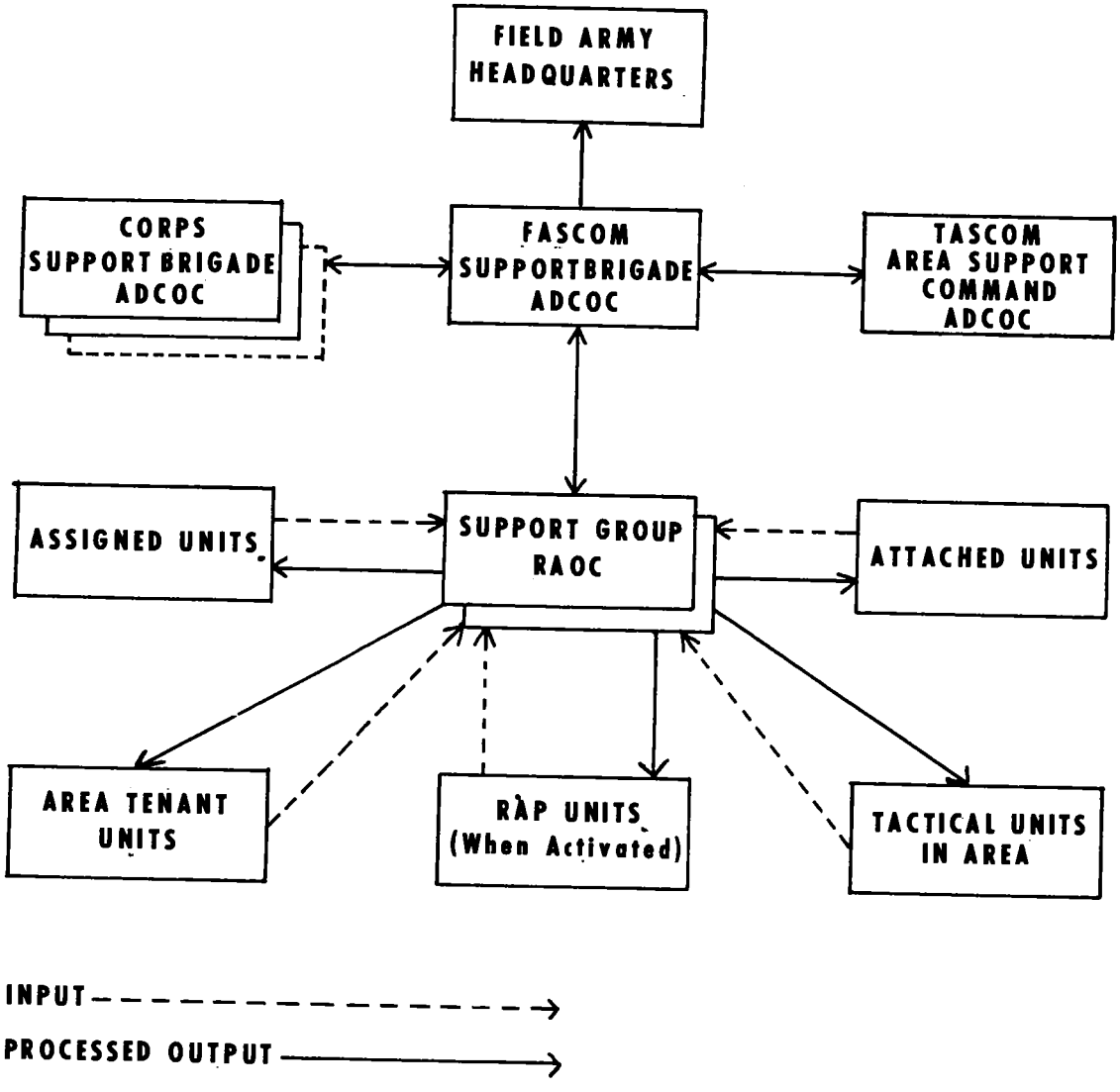

Figure 6. Anticipated flow of rear area security and area damage control information in FASCOM.

The anticipated flow of RAP information in the Field Army is shown in figure 6.

90. Organization for Rear Area Protection in TASCOM

a. TASCOM headquarters is relieved of day-to-day operations in order to perform its primary missions of planning and coordinating mid and long range combat service support operations. Responsibility for planning, coordinating, and executing RAP operations within the COMMZ is delegated to the area support command (ASCOM). To assist ASCOM in discharging this responsibility, each of the area support groups is assigned responsibility for RAP operations within its assigned geographical area.

b. The Theater Army Support Command commander assigns to the Assistant Chief of Staff, Security, Plans, and Operations the responsibility for developing policies and reviewing plans for RAP operations within the com-

munications zone. An area damage control center is provided to serve the entire headquarters. TOE 54–302G provides the personnel and equipment for the ACofS, Security, Plans, and Operations, TASCOM. Since TASCOM does not become involved in day-to-day operations, and responsibility for RAP operations is delegated to ASCOM, the staffing within the ACofS, Security, Plans, and Operations (TASCOM) provides only those people necessary to: develop broad policy guidance, establish priorities, allocate available resources, review rear area protection (RAP) plans, and advise the TASCOM commander in conflict-of-interest incidents which may arise between the area support command and the mission commands of TASCOM. The policy promulgated by TASCOM will clearly delineate the scope of authority of the area support command to conduct RAP operations, and the responsibilities of the mission commands to support RAP operations.

c. The assignment to area support command of responsibility for RAP operations in the communications zone requires the inclusion of appropriate personnel to staff a security and damage control branch in the ASCOM headquarters. The staffing of the Security and Damage Control Branch, Area Support Command is in TOE 54–402G.

d. Each area support group is responsible for RAP operations within its assigned geographical area and has assigned a RAOC (TOE 29–408) identical to the one assigned the Support Group in the Army Support Brigade, FASCOM. This permits any of the Area Support Groups to assume the functions of the Area Support Command ADCOC should it be unable to operate for any reason. The anticipated flow of information between headquarters is shown in figure 7.

91. Rear Area Operation Center (RAOC)

a. The RAOC (TOE 29–408) is assigned to each area support group in TASCOM and to each support group in the Army Support Brigade (FASCOM).

b. The RAOC is organized into four sections as follows:

(1) The detachment headquarters which provides supervision over and support to the other RAOC sections.

(2) The Plans and Operations Section which services the area headquarters, all tenant units, and adjoining RAOC's with the type data discussed above.

(3) The Rear Area Security Task Force Command Section which provides inspection, supervision, planning, and command control of RAP rear area security resources.

(4) The Area Damage Control Task Force Command Section which provides inspection, supervision, planning and command control of RAP area damage control resources.

c. Command for rear area security RAP measures is a territorial responsibility. The responsible area commander adjusts his command relationships with tenant units based on the seriousness of the situation.

d. Command for area damage control RAP operations is also a territorial responsibility based on the principle that the area commander is provided the authority necessary for operational command over units in his area during emergency area damage control operations.

92. Type RAP Elements

a. The three general classifications of RAP elements are security, damage control, and support.

b. The creation of these forces for RAP potential is a responsibility of the area commander in which he must determine what is available and what is required. Detailed discussions of the RAP task forces are contained in FM 19–45–1 (Test), Rear Area Protection.

93. Command and Control for Area Damage Control

Area damage control encompasses a range of situations that may vary widely in degree of destruction and impact. The severity of damage will determine the level of control over the activities at the incident site. Where the magnitude of destruction is such that a local commander cannot effectively exercise control over the local damage control activities, the area commander assumes responsibility.

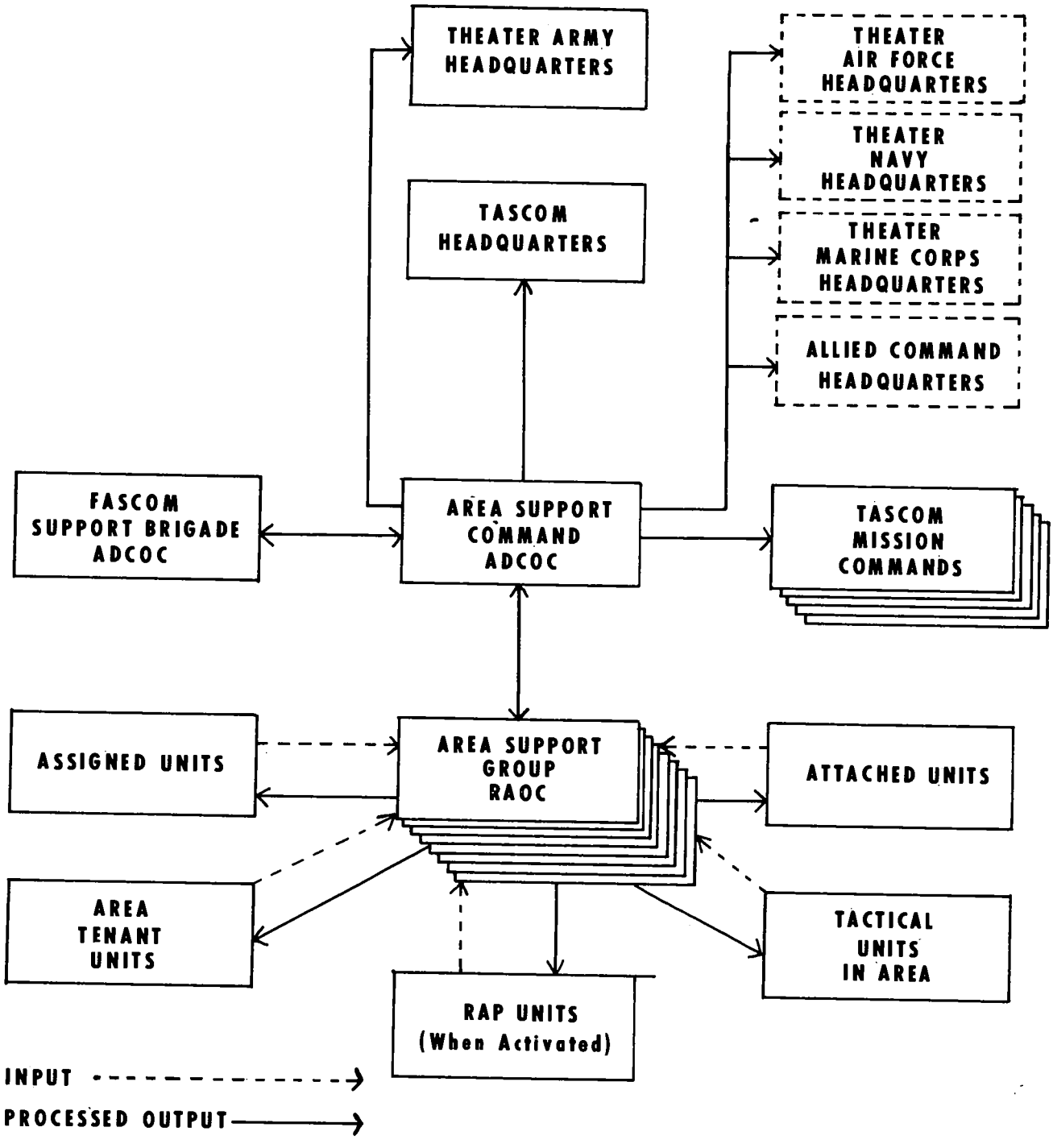

Figure 7. Anticipated flow of rear area security and area damage control of information in COMMZ.

a. When an incident occurs the ADC task force command element of the RAOC or a locally organized ADC party is dispatched to the site to assume responsibility for subsequent operations.

b. The ADC officer during the initial phase establishes control, assesses the damage, and determines what additional assistance may be required. Area damage control teams are provided in response to his request. These teams consist primarily of the following:

(1) Area Damage Control Light Rescue Squads and/or Platoons.

(2) Area Damage Control Labor Squads and/or Platoons.

Mission and capabilities of these teams are discussed in FM 19–45, Rear Area Protection (Test). Additional area damage control special teams may be activated, dependent on the incident, such as—

(3) Area Damage Control CBR Decontamination Team (app C).

(4) Area Damage Control Traffic Control Team.

(5) Radiological Survey Team (app D), and CBR Reconnaissance Team (app E).

(6) Signal Communications Team.

(7) Water Purification Team.

(8) Bath and Clothing Exchange Team.

(9) Transportation Team.

c. Commanders of the above teams performing technical functions would act as professional advisors to the incident commander.

d. Though the major element commander of the task force has operational control over all teams or units involved with the incident, the area commander retains his general responsibility for supervision and execution of area damage control activities. The area commander is responsible for prompt release and return of all teams and units to their parent organizations. Normally, ADC teams will not function longer than 24 hours. After this time, restoration operations will be under the appropriate commander.

94. Rear Area Protection

a. RAP forces should be adequate to counter the most likely threat. Effective rear area security requires that such installations plan, prepare, and rehearse for its own defense, and its part in the overall rear area security plan as established by the major commander responsible for the geographic area. The RAP forces must be trained and responsive to counter any threat to include use of CB munitions when authorized. Commanders of RAP forces must be knowledgeable in the use of chemical agents which may assist in reducing the resistance of guerrilla forces that have organized themselves in isolated fortified pockets within the area.

b. The use of chemical smoke generator units may be advantageously employed in rear area operations to protect critical installations, ports, and command headquarters, when assigned to TASCOM. Operations and planning for smoke operation details are contained in FM 3–50.

c. Rear area security tactical forces may also employ chemical smoke generator units, when assigned to TASCOM by the theater commander to facilitate operations against large enemy forces such as airborne troops, armor penetration or large guerrilla forces. The integration of chemical smoke and other chemical and biological agents must be completely coordinated with other forces operating in close proximity to or whose weapons are within range of the objective area. For employment of chemical and biological agents, see the FM 3–10 series manuals.

CHAPTER 9

PLANNING CBR SUPPORT

Section I. PLANNING PHASES AND FACTORS

95. General

a. CBR combat service support planning is accomplished concurrently with the planning for the combat operation. The closest coordination between combat and logistical planning is required because of the major effect of logistical support on the ability of a command to carry out combat operations. A service support plan *cannot* be formulated without coordination with all other arms and services. The fact that there will be some impact on CBR combat service support by friendly or enemy use of CBR weapons is obvious. CBR operations may increase requirements in both service support personnel and materiel. Both friendly and enemy capabilities for employment of these weapons must be constantly evaluated.

b. Anticipating demands is a prime function of every staff officer. The CBR plan outlines methods for fulfillment of these demands. There in no prescribed form, but a plan will normally consist of sections dealing with the significant elements of CBR service support, such as—

(1) Requirements for and employment of chemical personnel and units.
(2) Chemical maintenance support.
(3) Chemical class II and IV supply.
(4) Chemical class V supply.
(5) Reclamation of captured materiel.
(6) Evacuation and disposal.
(7) Specialized services.

c. To achieve the basic objective of support for tactical operations, any logistical plan should be devised with the following elements in mind:

(1) Efficient use of transportation.
(2) Reduction in the multiple handling of supplies.
(3) Reduction in order and shipping times.
(4) Elimination, or reduction to a minimum, of requirements that do not contribute directly to the progress of combat operations.
(5) Maximum and efficient utilization of manpower.
(6) Economical use of supplies and equipment.
(7) Reduction in items that are nice to have or whose need is improbable.
(8) Simplification of work to include the use of the latest mechanical methods for handling supplies and the use of automatic electronic devices for supply control.
(9) Establishment and maintenance of minimum supply levels.
(10) Establishment of alternate means to provide support so as to obtain flexibility.
(11) Provisions for mobility of installations.
(12) Establishment and coordination of rear area defense and area damage control.
(13) Provisions for dispersion of units and installations.

d. Inherent in any plan is the requirement for methods of avoiding excessive losses, particularly those that may be caused by CBR weapons. Consideration must be given to—

(1) Establishment of multiple, properly dispersed facilities and installations.
(2) Use of cover, concealment, camouflage, and revetments.
(3) Use of covered storage to the extent feasible to avoid contamination.

(4) Duplication of essential stock control records.
(5) Need for alternate communication facilities.
(6) Provision for plans and organization for damage control.
(7) Provision for alternate facilities, installations, and transportation means to insure continuous support for the combat forces.
(8) Protection for indigenous labor.
(9) Continuous evaluation of the enemy capability.

96. Responsibility for Planning

Each echelon is responsible for making plans that are based on the plans of the next higher echelon. Subordinate units must be furnished with data that will affect their planning as soon as such data are developed. Planning, however, must proceed even when complete instructions from the higher headquarters have not been furnished. The importance of planning as a continuous process cannot be overemphasized. Planning involves the utilization of known information supplemented by assumptions where facts are not available. Chemical planners must be alert to detect or anticipate changing conditions and to modify plans to meet each change.

97. Planning Considerations

The first element of chemical planning is to determine and evaluate the CBR support mission. This portion of the plan involves determining the significant elements of CBR support that will be required. A troop list can then be developed, and the requirements for CBR supplies may be calculated; thus, the basis is formed for a chemical support organization and logistical plan.

a. The following general steps are essential to the accomplishment of sound troop requirements planning:

(1) Determination of the functions or tasks to be performed.
(2) Determination of the number of troops to be supported.
(3) Selection of type of operating unit, with capability required.
(4) Calculation of number of operating units required.
(5) Provisions for command and control.

b. Many factors influence the number and type of chemical troops or technical personnel required to support any given operation. Principal factors are—

(1) Number and type of troops to be supported, their mission, and the extent of CBR support to be provided them.
(2) Climate and terrain.
(3) Size of the geographical area of operations.
(4) Attitude, availability, and capabilities of local civilians and prisoners of war.
(5) Local resources.
(6) Capabilities of chemical and multifunctional units.
(7) Enemy capabilities.
(8) CBR situation.

c. The task of determining supply requirements is basically one of forecasting the demand for each item required by all support forces in sufficient time to insure the arrival of the item at the time and place it is needed. Supply requirements are classified as follows:

(1) Initial supply requirements to provide for the initial issue of supplies or to complete shortages in the initial issue.
(2) Replacement and consumption requirements to keep the initial equipment up to authorized levels and to replenish supplies that may be consumed or expanded by using units or destroyed by enemy action.
(3) Reserve requirements to establish or replenish an approved reserve.
(4) Project requirements to provide supplies not authorized by established allowances, but approved for a special operation or purpose to include supplies to meet civilian needs.
(5) A more detailed discussion of supply requirements may be found in FM 100–10.

98. Planning Phases

Planning will be done in three phases: estimation, calculation, and modification.

a. Phase I Planning—Estimation.

(1) The estimation phase is the first step in developing an initial chemical troop list. It is also the first step in developing CBR supply requirements. Data available will be very limited. The data probably will consist only of the total number of divisions to be employed in the operation.

(2) Chemical troop requirement calculations are based on the total troop strength and the anticipated theater organization. If only the number of divisions is known, the total number of troops can be estimated by application of the division slice data found in FM 101–10. The division slice is used only in the estimation phase for very large forces, after which it should be discarded.

(3) Unit capabilities utilized in all the estimations should be verified by reference to the appropriate current TOE.

(4) The amount of CBR supplies may be initially estimated by use of the ton-per-man-per-day data contained in FM 101–10. The factors in FM 101–10 do not include initial equipment of troop units, but they do include tonnages for projected equipment and similar supplies (other than civilian or other relief supplies) that are required to support troops. Buildup of theater levels can also be determined by utilization of these data. The chemical planner may have to make an assumption concerning the status of equipment in the force in order to estimate the initial supply requirements. It will normally be assumed that the force will have all of its initial equipment. The chemical planner must balance the estimated supply requirements with the available lift tonnages.

b. Phase II Planning—Calculation.

(1) This phase begins when estimates are received from all arms and services in the form of initial tentative troop lists. The initial troop lists developed by all the arms and services must be accomplished by close collaboration, since any arbitrary unilateral change will affect the entire structure. For instance, the TASCOM or FASCOM Assistant Chief of Staff for Logistics must be aware of the total troop requirements if he is expected to provide protective clothing, and other CBR defensive materiels for the entire force. Similarly, all staffs must be made aware of any changes.

(2) After the tentative troop list has been developed, the division slice and other factors suitable only for initial estimations are discarded, and refined lists of equipment and personnel are developed. (Using the troop list, personnel strength and total equipment requirements can be calculated by use of appropriate equipment lists, tables of allowance, and special mission equipment lists.) Chemical staff officers should carefully scrutinize the troop lists of the other arms and services to determine their impact on CBR operations. The threat of CBR operations will also mean that the chemical officer will be required to furnish the other arms and services with information concerning its impact on their support. The troop list should be accurate and should reflect the actual troop requirements necessary to perform the CBR combat service support mission.

(3) During this phase, revised troop and equipment lists are distributed to planning staffs of all arms and services, and concurrent adjustments are made in each. Each planner should review the list and decide whether the next revision will increase or decrease troop spaces. This information is furnished all planners so that each will be aware of direction and limits changes which are to be applied. Close coordination must be maintained during this phase so that adjustments in other troop lists are properly reflected in chemical combat service or CBR multifunctionally oriented troop lists.

Normally several revisions are brought into proper balance.

(4) The tonnages of CBR supplies must be translated into quantities of CBR supplies by item. Consideration will be given to the phased deployment of troops; strategic and tactical plans of the supported forces; enemy capabilities affecting supply requirements; amount and status of equipment; replacement factors and consumption rates; capability and dependability of the transportation system; available lift tonnages; buildup time; project requirements; reserve requirements; supply levels; requirements of other services for CBR items; and climate, weather, and terrain in the area of operations.

c. *Phase III Planning—Modification.*

(1) The consolidated troop list produced in Phase II should provide a balanced force, each element of which is capable of performing its mission without augmentation. Phase III continues as long as the operation continues. It involves continuous refinement of troop and equipment lists, after consideration of such matters as distribution of troops by zone and area, locations of facilities, and preplanned loading lists. Plans for changes, substitution, or elimination of authorized equipment will be made at this time.

(2) If the planner can tentatively make the distribution of troops, determine the location of the depots and other major installations in phases I and II, the final determination is simplified. Each planner will become increasingly aware of the deployment of the troops of other arms and services throughout the theater; therefore, he must adjust his own distribution to meet the probable load.

(3) During this phase, changes to all plans are made as dictated by policy, command direction, changes in the tactical situation, or conditions peculiar to the theater of operations.

(4) Substitution of indigenous labor for military personnel should be made at this stage. At the same time, lists of class IV equipment to be issued for the use of the indigenous labor forces should be prepared. The substitution of indigenous labor for military personnel will throw the troop list out of balance, and several successive revisions such as those made in phase II may be required to restore it to balance. The CBR combat service support troop list will be affected considerably by the change in military strength.

99. Effect of Employment of CB and Nuclear Weapons

The employment of chemical, biological, and nuclear weapons will necessitate increasing specialized troop requirements and CBR supply requirements. It will also require a change in the mix of class II and IV supplies, especially those used for decontamination, clothing impregnation, and protection. The mix of class V supplies will also change. It may also be necessary to increase the number of chemical personnel in the multifunctional units of TASCOM, FASCOM, and divisional support commands. Requirements for covered maintenance shop space and storage space will increase. This increase will be necessary in order to provide for maintenance personnel and protection of supplies against contamination. Equipment will require monitoring and decontamination prior to repair.

100. Planning Factors

A planning factor is one element of knowledge used in planning. Factors may be represented by a fixed quantity, such as the quantity of troops in a task force. Other factors represent a ratio based on experience, such as the replacement factor (percentage of end items which must be replaced periodically). These factors are useful in planning even though the numerical values of such factors will probably change after actual experience data have been gained from an operation. FM 3–8, FM 101–10, SB 3–34, and SB 710–1 contain much valuable data for the staff officer. The key planning factors are—

a. Troop Basis. A troop basis is a planning document that sets forth a major command's troop requirements by numbers and types of units, designations, organizations, strengths, locations, assignments, grades, and branches within a personnel ceiling prescribed by higher headquarters. An approved troop basis constitutes a major commander's authorization for personnel and equipment (TOE and TD units).

b. Troop List. A troop list is any list of military units or individuals. Generally, troop list will contain the designations of all the units in the theater of operations, or all the units served by the theater's machine records unit. Such a list may include units located in the area but not assigned to the command, such as attached allied units. An approved troop list does not necessarily constitute a troop basis.

c. Troop Availability. The determination of troop availability is based on several factors. These factors are the troop requirement of the command, the overall troop ceiling set by higher headquarters, and the availability of specific type units. Troop requirements are coordinated to keep them within the overall ceiling and yet have a balanced force that can perform its mission.

d. Replacement Factor.

(1) Replacement factors for selected items of chemical materiel are listed in SB 710–1. FM 3–8 contains replacement factors and consumption rates for other chemical materiel. If the equipment density is known for any force, one can use these factors to compute the normal replacement requirements to maintain the initial equipment density.

(2) Replacement factors are reviewed periodically and are revised as necessary to reflect the latest experience data, with consideration given to new concepts of operation, maintenance, and technological advancements. They are used primarily in planning and are not used when adequate demand experience has been generated.

e. Consumption Rate. A consumption rate is the average quantity of an item expended or consumed during a given time interval expressed in quantities per applicable basis (rounds per weapon per day or rounds per man per day). It usually pertains to expendable items. Consumption rates are also reviewed periodically and are used primarily in planning requirements. They also are not used when adequate demand experience has been generated.

f. Maintenance Float Stockage Factor. A maintenance float consists of the major items of CBR equipment authorized for stockage by units having a maintenance mission, for issue to replace like equipment turned in for repair. Stockage factors are listed in SB 3–34.

g. Storage and Site Locations. Optimum storage area requirements for supported military operations are outlined in FM 101–10.

Section II. INDIGENOUS LABOR

101. General

Indigenous labor is an important source of manpower for the augmentation of certain units. Indigenous labor should be used whenever possible, and to the maximum profitable degree. The amount and type of labor that will be available must be considered in estimating service troop requirements. Auxiliary labor sources are prisoners of war, troops of allied nations, and local skilled and semiskilled civilians. Generally, this type labor cannot be used for handling or processing special ammunition or other classified materiel.

102. Availability and Utilization

a. Employment of Indigenous Labor. Indigenous skilled labor of an industrial nation can be used to a great advantage in most service support units. Indigenous labor is made available by coordination with the Assistant Chief of Staff for Personnel.

b. Hazardous Employment. Where there is a danger of enemy action, civilian labor is not dependable. This, as well as the usual troubles resulting from language differences, local labor laws, union rules, and national customs, causes

production difficulties. In addition, where large groups of indigenous labor are employed, careful consideration must be given to the extra surveillance required and to the security aspects of the operation. Continuous supervision is necessary to counteract or preclude slowdowns or acts of sabotage of any nature.

c. Equipment for Indigenous Labor. Indigenous labor must be provided the tools and equipment necessary to accomplish the task required. Commanders are required to provide the labor force with individual equipment, such as protective masks, protective clothing and shelter when these personnel are in a CBR environment. When indigenous labor is required to relocate because of military necessity, food, shelter, and individual protective equipment may be issued due to CBR operations.

d. Availability Estimates. During the planning stage, intelligence agencies can furnish estimates of the amount, types, quality, and attitude of indigenous labor that may be available in specific areas. After territory is occupied, more precise availability estimates may be obtained.

103. Procurement

Procurement of indigenous labor is normally conducted under the supervision of the G–1 of each command. In the communications zone, such labor is usually obtained from local governmental agencies such as labor offices established by civil affairs personnel. The responsibilities of agencies regarding procurement of labor, and establishment of standing operating procedures concerning the employment of such labor, are contained in FM 41–5. Civil affairs officers will maintain close coordination with the G–1 and G–4 when recruiting and utilizing indigenous labor.

104. Phasing Chemical Units into a Theater of Operations

a. Staff Coordination. The fullest cooperation between the chemical officers of the supporting and supported forces is essential. The support plan for the operations must be compatible with the planned buildup of the communications zone. The phasing of troops must be timely and in proper sequence, consistent with the progress of the expansion of the theater of operations.

b. Control. Until the army area has been expanded sufficiently to permit establishment of a communications zone, the logistical organization is under control of the field army commander. Chemical units destined for ultimate assignment in the communications zone will be attached to this force and will be under the operational control of the field army commander. Sites must be obtained for chemical units so that they will be located properly for future support of the theater of operations.

APPENDIX A

REFERENCES

Department of the Army pamphlets of the 310-series and DA Pam 108–1 should be consulted frequently for the latest changes or revisions of references given in this appendix and for new publications relating to material covered in this manual.

AR 11–8	Logistic Policies.
AR 11–14	Army Programs—Materiel Readiness.
AR 220–58	Organization and Training for Chemical, Biological, and Radiological Operations.
AR 310–32	Organization and Equipment Authorization Tables Personnel.
AR 320–5	Dictionary of United States Army Terms.
AR 320–50	Authorized Abbreviations and Brevity Codes.
AR 700–5	Organization and Operation of Inventory Control Points.
AR 700–62	Chemical Protective Clothing Policy and Utilization of Certain Chemical Corps Units and Equipment in Combat Areas.
AR 710–60	Replacement Factors and Consumption Rates for Army Materiel.
AR 711–16	DSU/Installation Stock Control and Supply Procedures.
AR 725–50	Requisitioning, Receipt, and Issue System.
AR 750–5	Organization, Policies, and Responsibilities for Maintenance Operations.
AR 750–10	Materiel Readiness (Serviceability of Unit Equipment).
FM 3–8	Chemical Reference Handbook.
FM 3–10	Employment of Chemical and Biological Agents.
(S) FM 3–10A	Employment of Biological Agents (U).
(C) FM 3–10B	Employment of Chemical Agents (U).
FM 3–12	Operational Aspects of Radiological Defense.
FM 3–50	Chemical Smoke Generator Units and Smoke Operations.
FM 3–85	Chemical Service Units.
FM 9–1	Ordnance Service in the Field.
FM 9–6–1 (TEST)	Ammunition Service, FASCOM (Test).
FM 10–50	Supply and Transport Battalion, Division Support Command.
FM 10–63	Handling of Deceased Personnel in Theater of Operations.
FM 19–15	Civil Disturbances and Disasters.
FM 19–40	Enemy Prisoners of War and Civilian Internees.
FM 19–45T (TEST)	Rear Area Security and Area Damage Control (Test).
FM 21–40	Chemical, Biological, and Nuclear Defense.
FM 21–48	Chemical, Biological and Radiological (CBR) and Nuclear Defense Training Exercises.

FM 27–10	The Law of Land Warfare.
FM 29–3T (TEST)	Direct Support Supply and Service (Test).
FM 29–10–1 (TEST)	The Field Army Supply Management System (Test).
FM 29–20T (TEST)	Maintenance Support, FASCOM (Test).
FM 29–22	Maintenance Operations in the Field Army.
FM 29–45T (TEST)	General Support Supply and Service (Test).
(C) FM 30–5	Combat Intelligence (U).
FM 30–16	Technical Intelligence.
FM 31–15	Operations Against Irregular Forces.
FM 31–16	Counterguerrilla Operations.
FM 31–21	Special Forces Operations.
(S) FM 31–21A	Special Forces Operations (U).
FM 31–45	EOD Services.
FM 41–10	Civil Affairs Operations.
FM 54–2	The Division Support Command.
FM 54–3	The Field Army Support Command.
FM 54–4	The Support Brigade.
FM 54–5T (TEST)	Supply and Maintenance Command, TASCOM (Test).
FM 54–8T (TEST)	Rear Area Protection (Test).
FM 61–100	The Division.
FM 100–5	Field Service Regulations, Operations.
FM 100–10	Field Service Regulations, Administration.
FM 100–15	Larger Units.
FM 101–5	Staff Officers Field Manual: Staff Organization and Procedure.
FM 101–10–1	Organizational, Technical and Logistical Data—Unclassified Data.
FM 101–10–2	Organizational, Technical, and Logistical Data—Extracts of TOE's.
(S) FM 101–10–3	Organizational, Technical, Logistical Data—Classified Data (U).
FM 101–40	Armed Forces Doctrine for Chemical and Biological Weapons Employment and Defense.
TM 3–210	Fallout Prediction.
TM 3–220	Chemical, Biological, and Radiological (CBR) Decontamination.
TM 3–250	Storage, Shipment, and Handling of Chemical Agents and Hazardous Chemicals.
TM 3–261	Handling and Disposal of Unwanted Radioactive Material.
TM 3–500	Chemical Corps Equipment Data Sheets.
TM 9–500	Data Sheets for Ordnance Type Materiel.
TM 9–1900	Ammunition, General.
TM 9–1950	Rockets.
TM 38–230	Preservation, Packaging, and Packing of Military Supplies and Equipment.
TM 38–250	Packaging and Handling of Dangerous Materials for Transportation by Military Aircraft.
TM 38–750	Army Equipment Record Procedures.
TM 38–750–1	Maintenance Management Field Command Procedures.
TM 743–200	Storage and Materials Handling.

	TM 743–200–1	Storage and Materials Handling.
	SOLOG Agreement 75	Procedures for Repair and Recovery of Military Technical Equipment.
	SB 3–24	Shipping Chart for Chemical Corps Ammunition, Ammunition Components, and Military Chemical Agents.
	SB 3–32	Disposal of Supplies and Equipment, Chemical Corps Ammunition.
	SB 3–34	Maintenance Float CBR Equipment.
	SB 3–37	No Depot Maintenance List—CBR Equipment.
	SB 3–39	Basic Loads of Chemical Nontoxic Ammunition.
(C)	SB 38–26	Ammunition Supply Rates (U).
	SB 38–8–1	Storage of Army Supplies and Equipment Covered and Open Storage.
	SB 38–100	Preservation, Packaging, and Packing Materials, Supplies and Equipment used by the Army.
	SB 700–20	Army Adopted Items of Materiel.
	SB 710–1	Supply Control: Replacement Factors for Army Materiel, PEMA.
	TA 50–914	Individual Safety and Protective Clothing and Equipment.
	TC 101–2	Tactical Operations Centers.
	DA Pam 690–80	Administration of Foreign Labor During Hostilities.
	DA Pam 750–38	Army Equipment Records Procedure.
	JCS Pub 1	Dictionary of United States Terms for Joint Usage.
	JCS Pub 2	United Action Armed Forces (UNAAF).
(C)	JCS Pub 3	Joint Logistics and Personnel Policy and Guidance (U).

APPENDIX B

UNITS PERFORMING CBR COMBAT SERVICE SUPPORT

TASCOM (COMMZ)

TOE No.	*Title*	*Service/Function*
54–302	Headquarters and Special Troops, TASCOM*	1, 2, 7
3–97	General Chemical Laboratory*	8
3–500	Chemical Service Organization (Team FB)*	5
3–500	Chemical Service Organization (Team JA)*	2, 7
9–22	Headquarters and Headquarters Company, Ammunition Group*	1
9–36	Headquarters and Headquarters Company, Ammunition Battalion (DS/GS)*	1
9–38	Ammunition Company (GS)	3, 6
9–48	Special Ammunition Company (GS)*	3, 6
9–59	Guided Missile Maintenance Company (GS)	6
10–437	Laundry and Renovation Company	5
29–118	General Supply Company	3
29–119	Repair Parts General Support Supply Company	3
29–127	Heavy Materiel Supply Company	3
29–134	Light Equipment Maintenance Company (GS)*	4
29–137	Heavy Equipment Maintenance Company (GS)*	4
29–139	Collection and Classification Company*	6
29–504	Property Disposal Company*	8
29-512	Headquarters and Headquarters Company, Field Depot	2, 6

AREA SUPPORT COMMAND (COMMZ)

9–500	Munitions Service Organization (Teams GA, GC)	9
19-262H	Headquarters and Headquarters Det, Military Police Brigade*	1, 7
29–136	Headquarters and Headquarters Company, Maintenance Battalion*	4, 5
29–147	Supply and Service Company*	3, 5
29–427	Maintenance Support Company*	4

FASCOM (FIELD ARMY)

54–12	Headquarters and Headquarters Company, Special Troops*	1, 7
54–22	Headquarters and Special Troops, Support Brigade*	1, 7
29–102	Headquarters and Headquarters Company Support Group*	1, 7
9–22	Headquarters and Headquarters Company Ammunition Group*	1

FASCOM (FIELD ARMY)—Continued

TOE No.	*Title*	*Service/Function*
9–36	Headquarters and Headquarters Company, Ammunition Battalion (DS/GS) *	1
9–37	Ammunition Company (GS)	3, 6
9–47	Special Ammunition Supply Company, Missile*	3
9–48	Special Ammunition Company (GS) *	3, 6
9–59	Guided Missile Maintenance Company (GS)	6
9–500	Munitions Service Organization EOD (Teams GA, GC)	9
29–114	Field Service (GS) Company (Fwd) *	3, 5, 6
29–118	General Supply Co.	3
29–119	General Support Supply Company Repair Parts	3
29–124	Field Service (GS) Company (Army) *	3, 5, 6
29–134	Light Equipment Maintenance Company (GS) *	4
29–137	Heavy Equipment Maintenance Company (GS) *	4
29–139	Collection and Classification Company I	6
29–147	Supply and Service Company*	3, 5
29–206	Main Support Company*	4
29–207	Light Maintenance Company (DS) *	4

* Assigned chemical personnel integrated into TOE.

Note. 1. CBR Staff
2. CBRE
3. Supply
4. Maintenance
5. Impregnation (Reimpregnation)
6. Decontamination
7. RAP (ADCOC)
8. Laboratory
9. Demilitarization of Ammunition

APPENDIX C

AREA DAMAGE CONTROL RADIOLOGICAL SURVEY TEAMS

Capabilities

1. Conduct ground radiological survey of an area of 15 to 40 square kilometers per hour.

2. Conduct aerial radiological survey of an area of 130 to 450 square kilometers per hour.

Team A—Ground Radiological Survey Team

Personnel:

Duty position	*Rank*	*Number*	*Remarks*
Rad Survey Eqpt Operator	any	1	Trained for ground rad survey
Data Recorder/Radio Operator	any	1	Trained for ground rad survey
Vehicle Driver	any	1	

Equipment	*Number*
¼ Ton truck, APC or equivalent vehicle	1
Radiacmeter IM–174/PD	1
Radiacmeter IM–93/PD	1
Radio Set, AN/VRC–46 or equivalent	1
DA Form 1971–1–R	10

Team B—Aerial Radiological Survey Team

Personnel:

Duty position	*Rank*	*Number*	*Remarks*
Rotary Wing Pilot	any	1	Trained for aerial rad survey
Rad Survey Eqpt Operator	any	1	Trained for aerial rad survey

Equipment	*Number*
Rotary Wing Aircraft	1
Radiacmeter IM–174/PD	1
Radiacmeter IM–93/PD	1
DA Form 1971–1–R	10

Remarks

a. These teams can be organized by any unit authorized the appropriate equipment. TA 50–914 authorizes one IM–174/PD for each survey party.

b. There is no requirement that both members of Team B come from the same unit. One unit may provide the aircraft (with pilot) and another unit may provide the rad survey equipment operator.

APPENDIX D

AREA DAMAGE CONTROL CBR DECONTAMINATION TEAM

Capabilities

1. Provides third echelon CBR decontamination of terrain and materiel.

2. Provides emergency third echelon CBR decontamination for approximately 60 individuals per hour.

3. Adaptable for fire fighting and mobile shower service.

Duty Position	*Rank*	*Number*	*MOS*
Decon App Crew Chief	E5	1	54B20
Decon Eqpt Operator	E4	1	54B20
Decon Eqpt Helper	E3	1	54B20
Sprayman Leader	E2	2	54B20
Cml Opns Helper	E2	2	54B20

Equipment

Decontaminating Apparatus Power Driven Truck Mounted.

Remarks

Organized by all units authorized above equipment.

APPENDIX E

AREA DAMAGE CONTROL CBR RECONNAISSANCE TEAM

Capabilities

Can perform CBR reconnaissance of the site of a nuclear, chemical, or biological attack and furnish essential data to the commander. The team has little capability for evaluating the collected information and will function most effectively when receiving instructions from and reporting to a CBRE or comparable organization.

Duty Position	*Rank*	*Branch*	*MOS*
CBR Recon Officer	CPT	CM	57318
CBR Recon SGT	E7		54E50
Decon SGT	E6		12D40
CBR Recon Sp	E5		54E20
CBR Ident Kit Oper	E5		92D40

Equipment	*Number*
Radiac Set AN;PDR-27 ( )	1
Radiacmeter IM-93/UD	5
Radiacmeter IM-174/PD	1
Detector Kit Chemical Agent, M18A2	2
Sampling and Analyzing Kit CBR Agent, M19, LIN S29577	1
Truck ¾ Ton with AN/VRC-46 mtd	1

Remarks

This is Team LA, TOE 3-500G (Draft)

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Official:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

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